CB Li k U er Ma ua

CanadaBay
Medical Centre for Excellence
N.S.W Australia

CB Link Portal

Canada Bay Medical Centre

Canada Bay Link is a web portal, designed for easy communication, sharing and backup of patient scans and reports.

CB Link User Manual

Canada Bay Medical Centre

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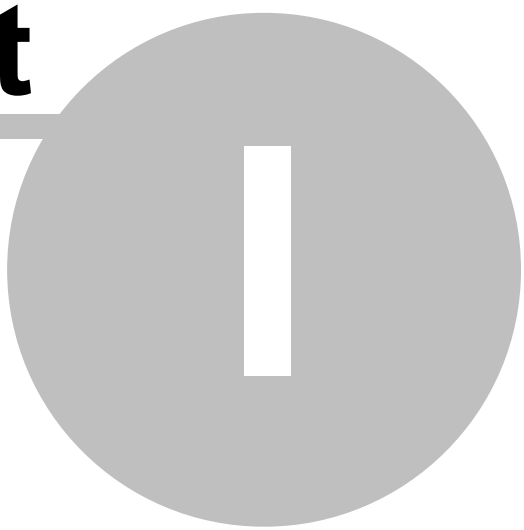


1 Overview

Welcome to the Canada Bay Link pages!

CB Link portal are web-based pages, designed for easy communication and backup of patient images and reports. Primary pages include online multiplanar image viewing, offsite data storage, administrative reporting tools and teleradiolgy workflow.

1.1 Introduction

After a CB scan has been performed, the case data are automatically backed-up on a secure central server. With password-protected access, users can access studies from any web-enabled computer. CB Link portal also allows another colleague to view the case at your discretion.

1.2 Table of Symbols

New	
Online	
Offline	
Transfer in Progress	
Error	
Initiate Cancellation for Send of Review	
Cancel Review for User	
Download Study File	
Send for Review	

1.3 System Requirements

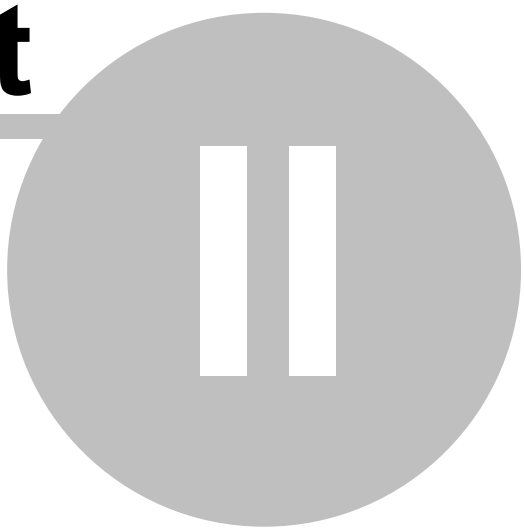
System Compatibility:
Microsoft Windows XP Pro SP2 or higher
Microsoft Windows Vista or Windows 7
Microsoft Internet Explorer v6, v7 or v8

Minimum Required Configuration:
1.0 GHz processor, 512 MB RAM, 64 MB video card (XP)
1.0 GHz processor, 1 GB RAM, 64 MB video card (Vista)

Recommended Configuration:
1.5 GHz processor, 1 GB RAM, 128 MB video card (XP)
1.5 GHz processor, 2 GB RAM, 128 MB video card (Vista)

1280 x 1024 is the recommended screen resolution. Lower resolutions may work in full screen mode (F11).

Part



2 Quick Guide

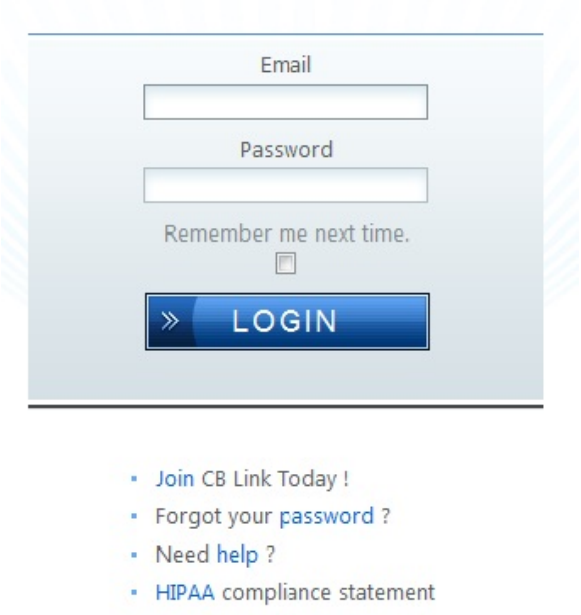
In this section you can find useful information about *CB Link* basics and navigation principles used across the portal.

You will find information on the following topics:

- Log In
- Log Out
- Current Parameters
- Menu
- Perform a Search
- Navigate a List
- Tab Navigation
- Info Bar

2.1 Log In

A successful login requires a valid email address and a password of already created account. There is also an option of remembering the user for next log in.



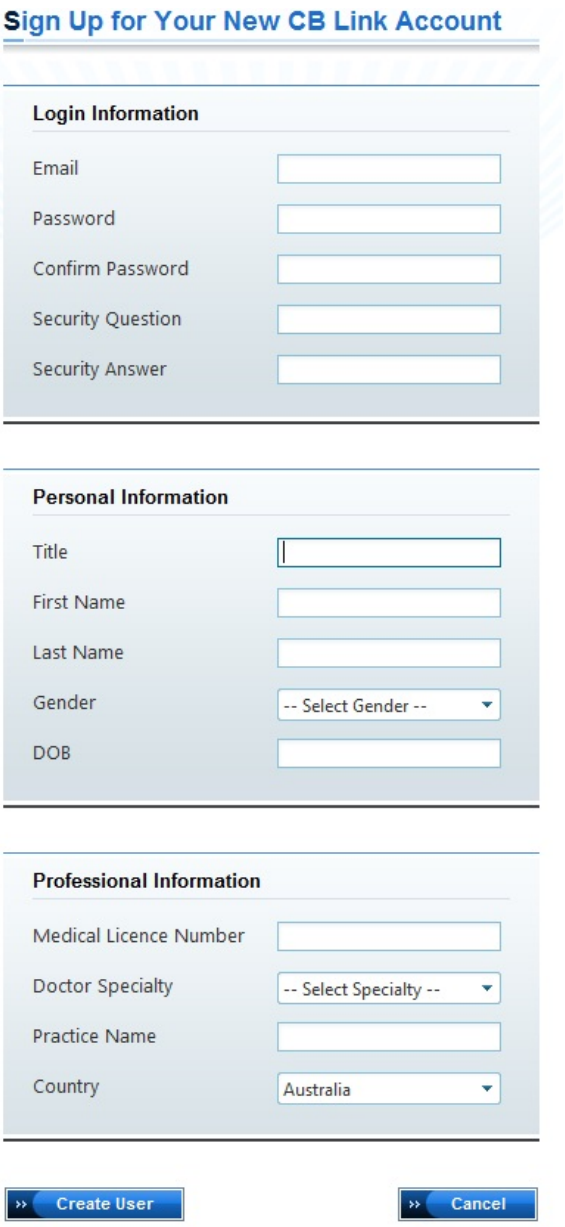
From this page you can:

- Register and set-up an account, following the **Join CB Link Today** prompts on www.cblink.com.au main page.

- Recover a forgotten password by clicking on **Forgot your password**? and following the on-screen prompts.
- Acquire help on CB Link pages by clicking on **Need help?**
- Learn more about Gammasonics Technologies compliance statement by going to **HIPAA compliance statement**.

2.2 Register

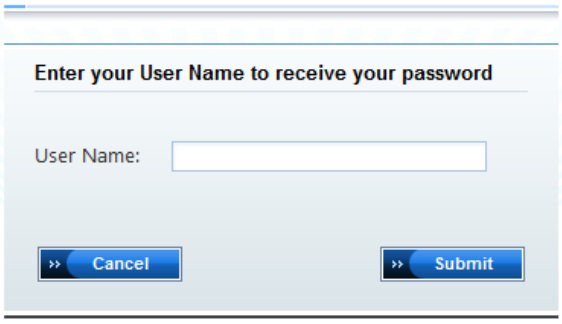
To register and set-up an account, follow the **Join CB Link Today** prompts from the Log In page. The Registration page will open.



After inserting relevant information create *CB Link* account clicking on the **Create User** button, or cancel registration by going to the **Cancel** button.

2.3 Forgot Your Password?

To recover a forgotten password click on **Forgot your password**? in the Log In page and follow the on-screen prompt.



After entering and submitting your Username (email address), a temporary password will be sent to your email account.

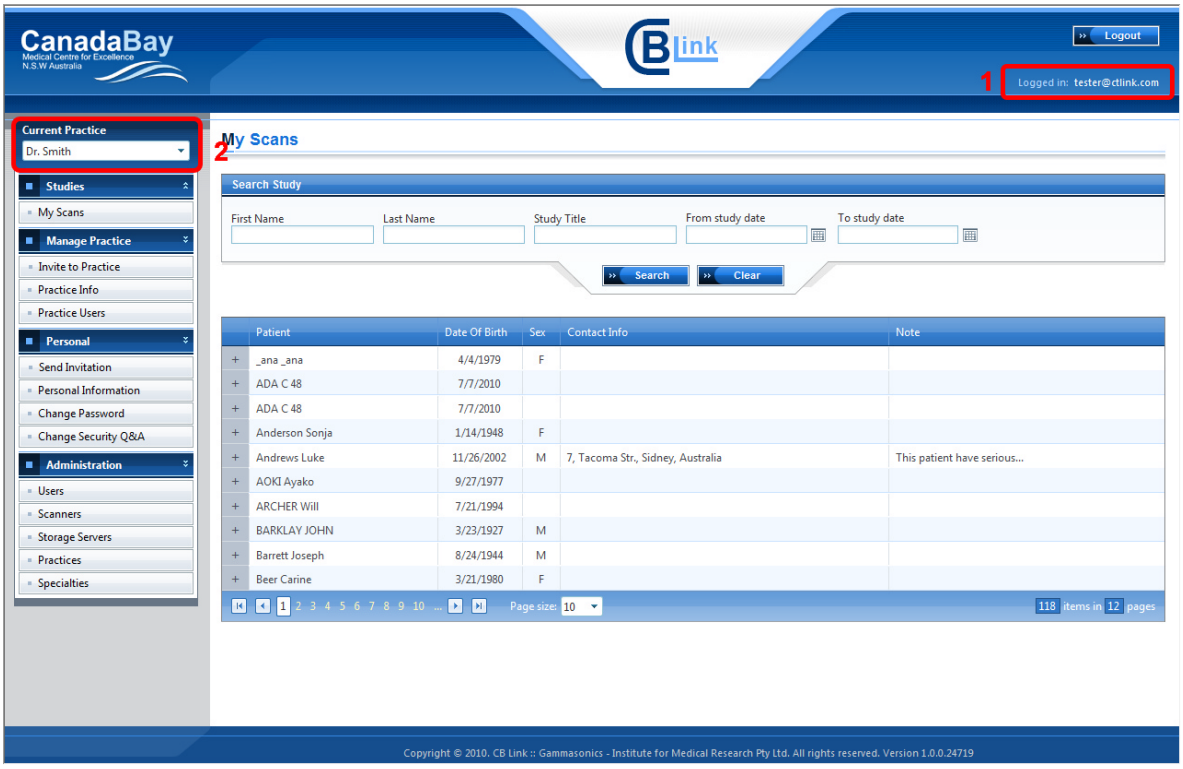
2.4 Log Out

To log out from *CB Link* portal, click on the **Log Out** button at top right corner of the page (as shown in picture below).

It will take user to the Log In page of *CB Link* portal.

2.5 Current Parameters

As long as logged in, user can at any time get information on an account and username he is signed in with (marked with 1) and his current practice (marked with 2).



In a case of having more than one practice, user can to select among his practices from the list (as shown in picture below).

2.6 Menu

Navigation in *CB Link* portal is done through navigation menu. The **Menu** (marked red) is available from any screen on *CB Link* portal after user logs in.

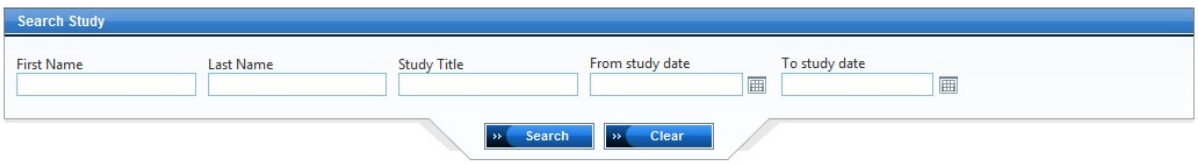
CB Link users can access different sections of the **Menu** based on their privileges assigned:

- Every *CB Link User* can access **Studies** and **Personal** section of the menu.
- If a *Practice Administrator*, user can access **Manage Practice** menu for his practices.
- If a *CB Link Administrator*, user can access **Administration** menu, to manage users, scanners, storage servers, practices and specialties.

2.7 Preform a Search

The *CB Link* pages - **My Scans**, **Practice Users**, **Users**, **Scanners** and **Practices** contain a search area to locate specific items.

Note: A search will only be performed within the context of the list you are searching in (i.e. study).



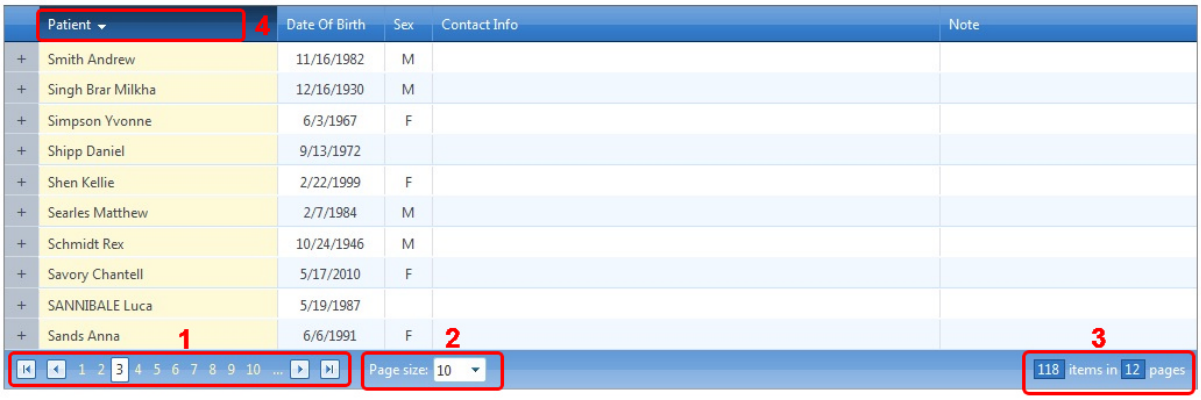
In the *Search* area you can:

- *Search* through the list of items (e.g. studies, practices) based on item property (study title, time range, practice name)
- *Clear* all specified search filters on that page

2.8 Navigate a List

CB Link pages present various lists of items (e.g. patients, users, scanners). All these lists use the same navigation principles:

- To navigate through item pages use *navigation bar* at the bottom of the list (marked with 1)
- To access item from the list (if functionality allowed) click on relevant item.
- Page size (number of items on the page - marked with 2) is presented next to the page navigation bar. To set the size of the items page, select one of the options 10, 20 or 50.
- Total number of items in the list and number of pages is presented in right bottom corner of the page (marked with 3)
- To order items in the list by specific parameter, click on that parameter in the list header (marked with 4)



(e.g. in a case above it is 3. from 12 pages of list of 118 patients presented in descending alphabet order by Patient Name. The page size is set to 10 items per page)

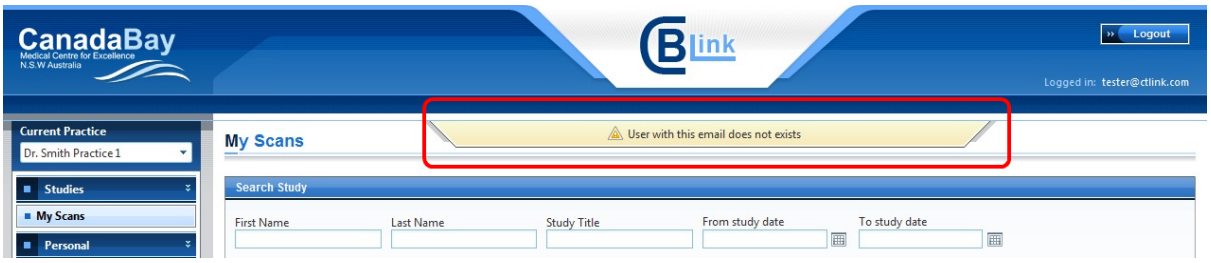
2.9 Tab Navigation

Several *CB Link* pages (e.g. *Edit User, Edit Practice* in *Administration* section) contain information in several tabs.

To open a tab (marked red in the picture above) click on specific tab name (e.g. *Practices*).

2.10 Info Bar

Relevant information (e.g. upon trying to send a study for review) User can also find in the *Info Bar* at the top of the page (as shown in picture below).



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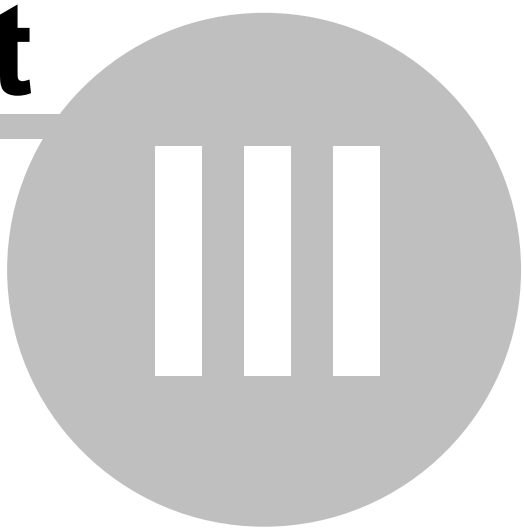
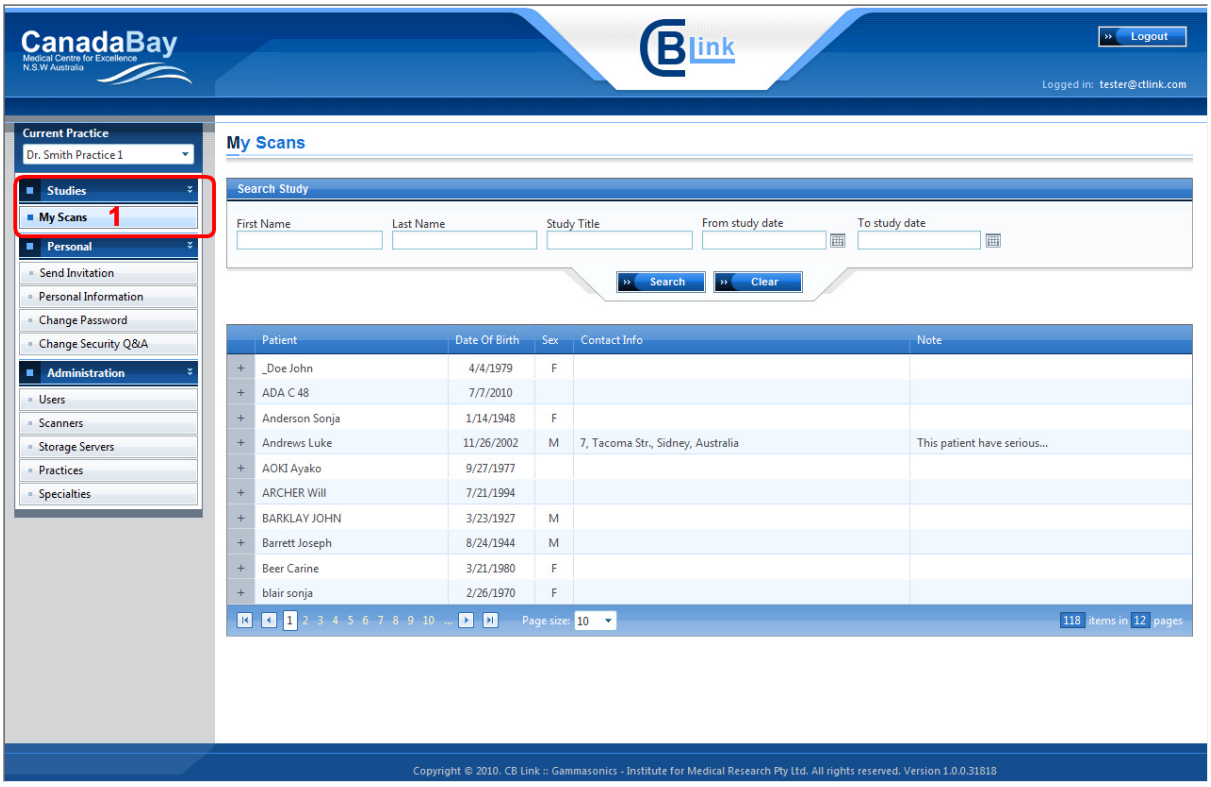
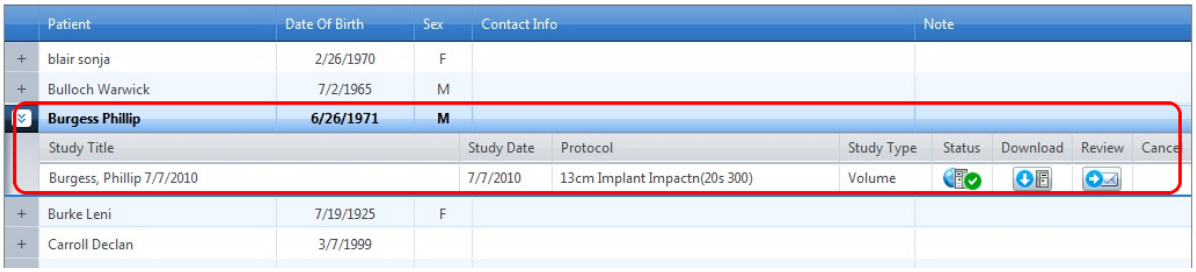


3 Studies

To access *CB Link Studies* pages, click on **My Scans** within *Studies* menu (marked with 1). It will take you to *My Scans* page (as shown in picture below) presenting the list of patients with your studies.



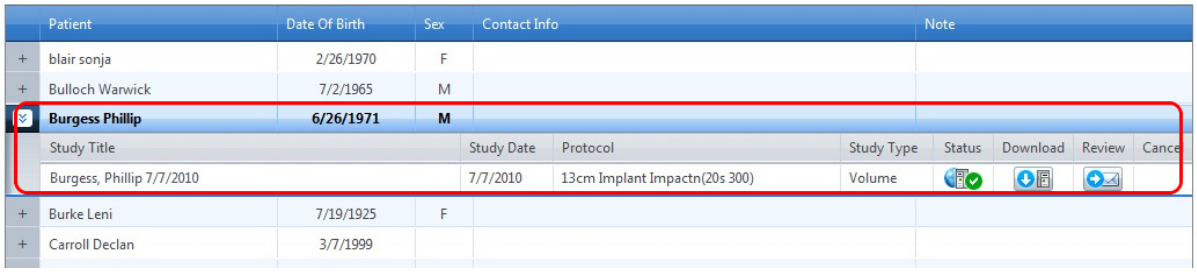
Studies are listed under patients' names as shown in the picture below.



To find a patient's study, you can search by patient or by a study information.

3.1 Study Details

To access studies of one patient, click on symbol **'+'** left of the patient name. The list of studies (see picture below) will open.



Note: Your studies are scans that were made by you or that were sent to you for a review.

As a *CB Link User* you can find following details about every study:

- Study Title
- Study Date
- Protocol
- Study Type
- Transfer Status

A Transfer Status of the study can be:

- *New* - for a new study
- *Transfer Started* - study with transfer in progress
- *Online* - study available for review
- *Error* - study transferred with error, not available

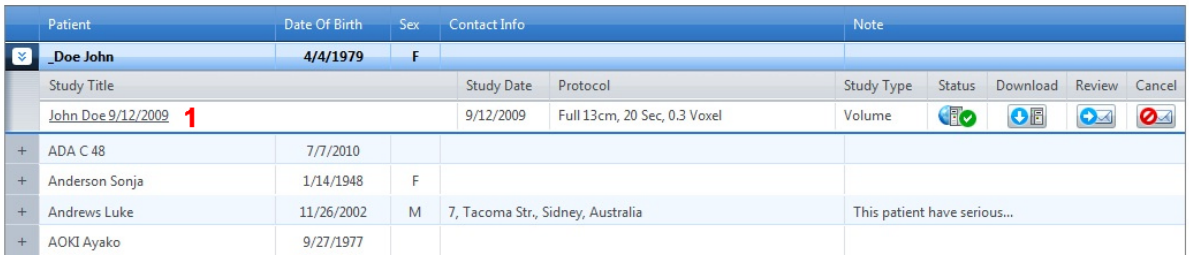
Only *Online* studies are available for immediate review.

From this page you can:

- Review study (scan) for a patient by clicking on a Study Title you want to open (see *View a Study* section)
- Download a study
- Send study to a colleague for review
- Cancel request for study review

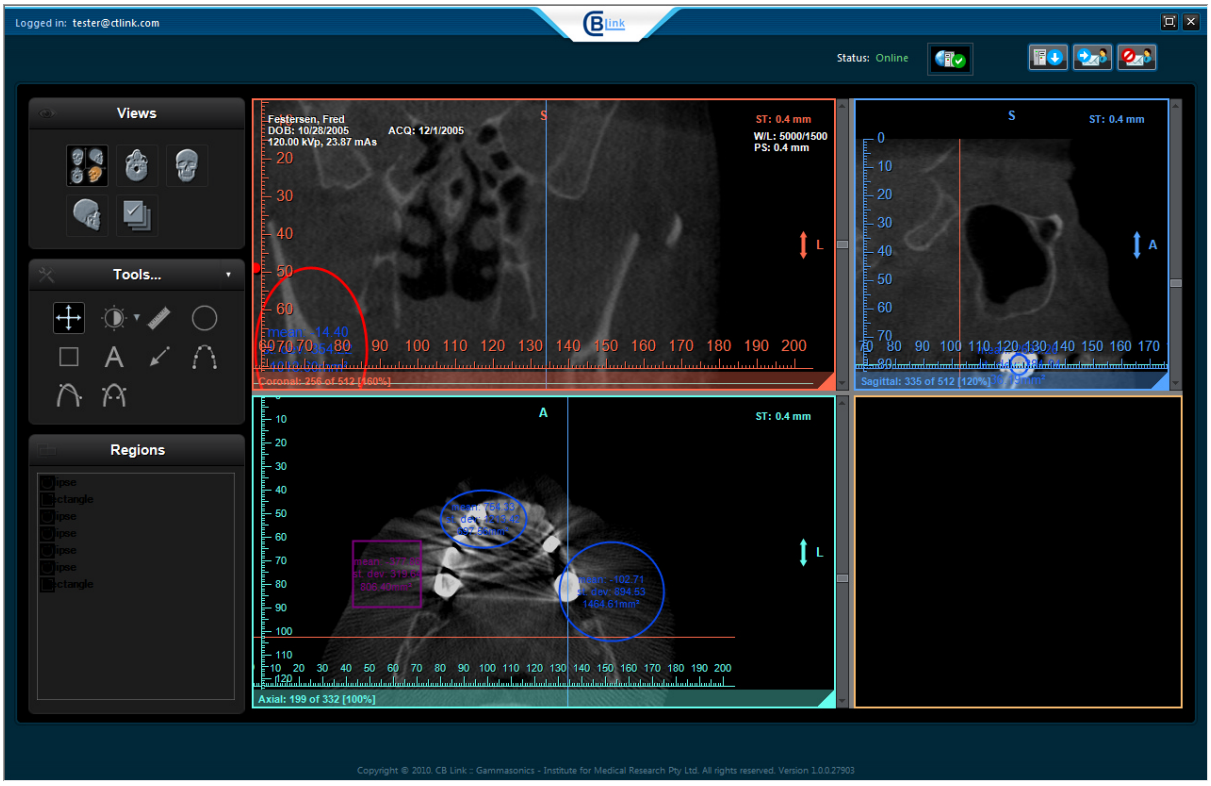
3.2 View Study

To open (review) a study of a patient, click on the Study Title (marked with 1).



Note: First time CB Link User is initiating viewing of any study on his computer, the Study Viewer (activeX control) will be downloaded from the server and installed on user's computer. Additionally, every time a new version of the Study Viewer is posted on the server, it will be downloaded again and installed in the same way.

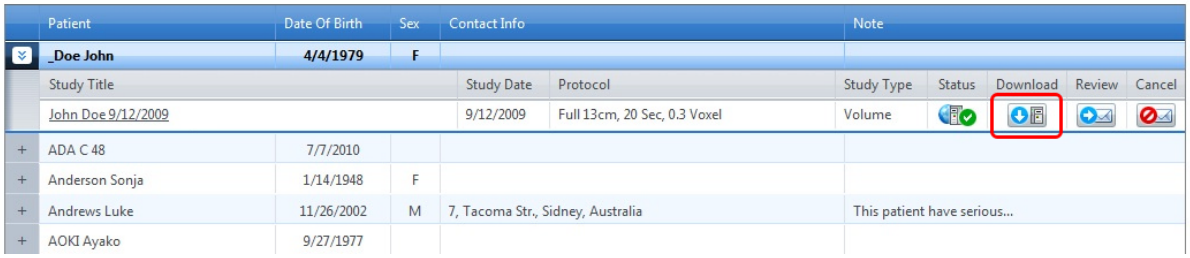
If user is trying to access a specific study for the first time on his computer, the study has to be transferred prior to the opening. After the study is transferred (with a status *Online*), **Study Viewer** will open it in Study View page (as shown in a picture below)



For more information on the **Study Viewer** see section *7. Study Viewer*.

3.3 Download Study

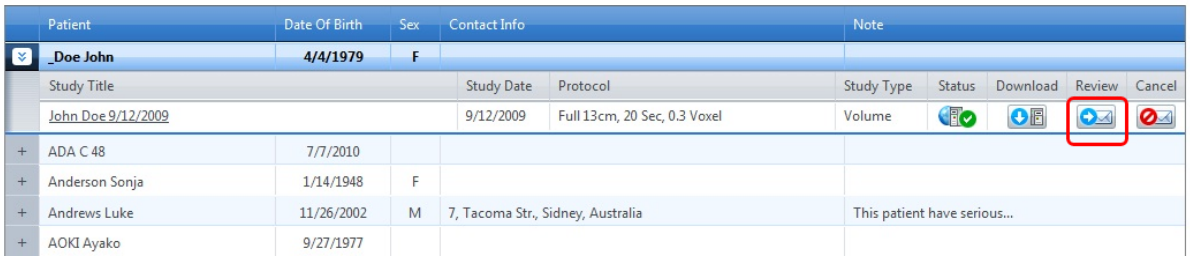
To download a study, click on the **Download** button (marked red in a picture below) for that study.



Window will pop up to specify location where file will be downloaded and saved.

3.4 Request Review

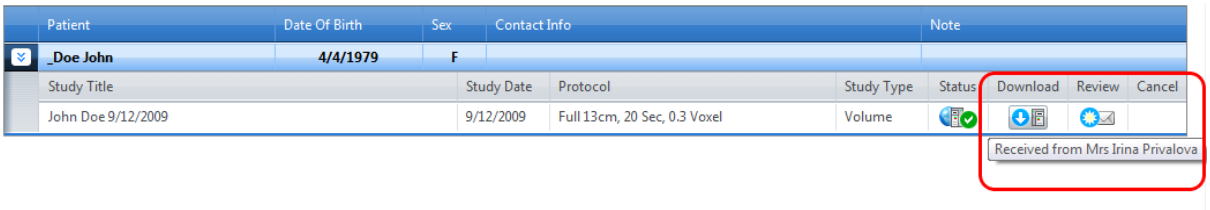
To send a request to a colleague to review a study, click on the **Review** button (marked red in a picture below) for that study.



Window will pop up to specify email address of colleague to send review request message:

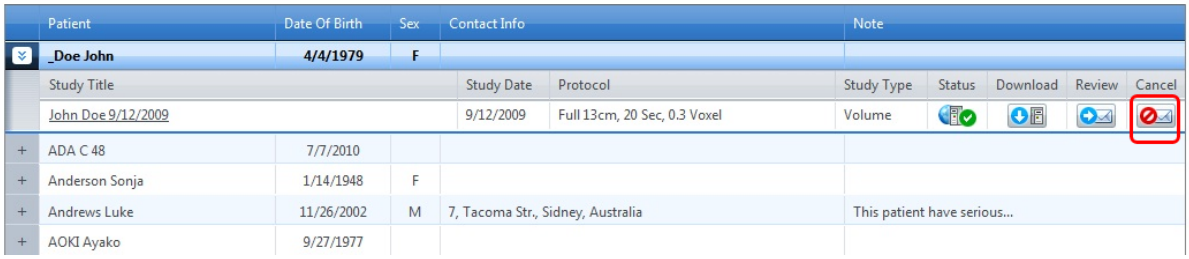
> Dear <Name>,
>
> A study has been sent to you by <Requester Name>.
> Please log in to CBLink.com.au to view the study.
>
> Best regards,
> CTLink

After sending the request for a scan review, *colleague - request recipient* will be able to see relevant study in his study list in the My Scans page. In the **Review** section (marked red) it will be noted on mouse-over who was the request initiator.

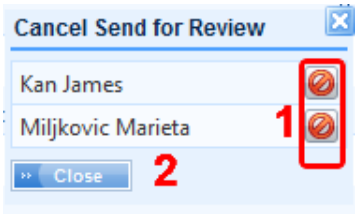


3.5 Request Cancellation

To cancel request for a study review click on the Cancel button (marked red in a picture below).



The window will pop up with the list of current request recipients for that study.



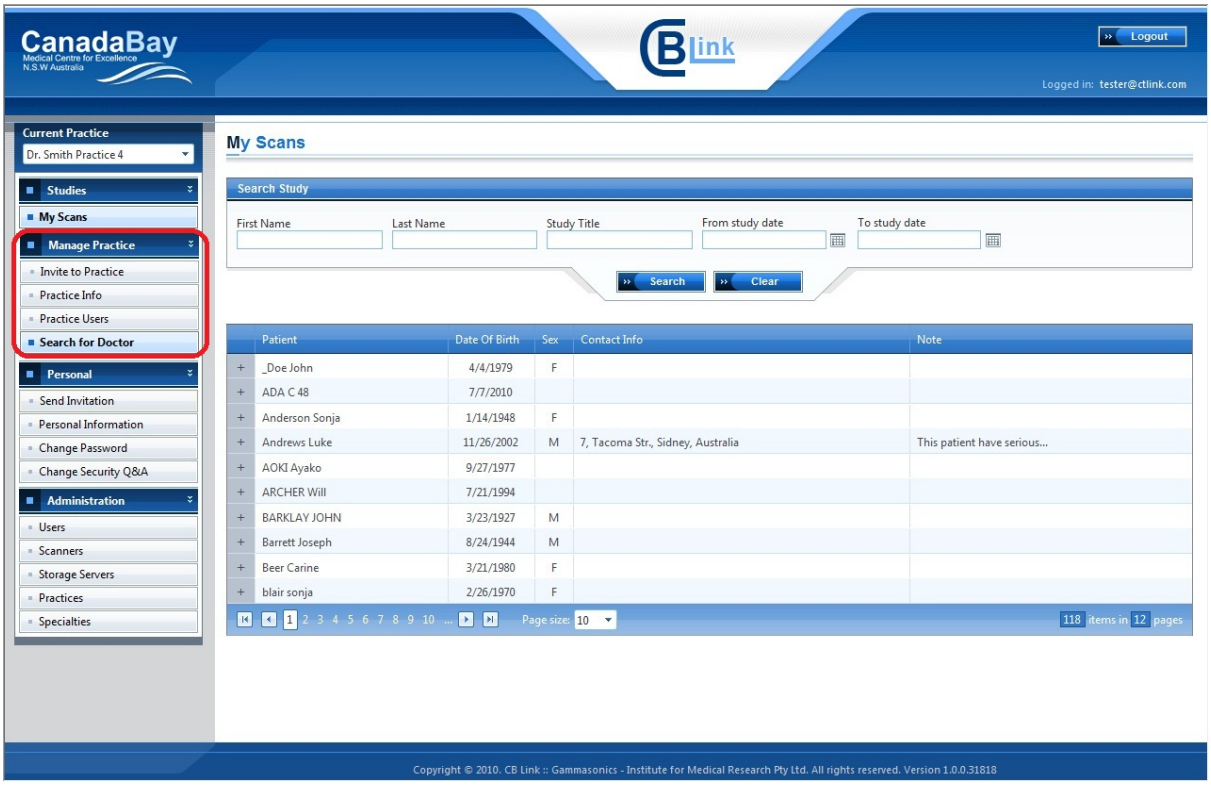
To cancel request to a specific user, click on the **Cancel** button next to him (marked with 1 in the picture).

To close the window click on the **Close** button (marked with 2).

Part

4 Manage Practice

To access *Practice* pages in *CB Link* portal, go to **Manage Practice** section of the menu (marked with red).



Note: A simple CB Link user, that is not a Practice Administrator will not have access to this section of the Menu. Additionally, note that **Manage Practice** menu will appear only when user logged in is administrator for currently selected practice

(e.g. in the picture above, logged user is a Practice Administrator for current Dr. Smith Practice 4)

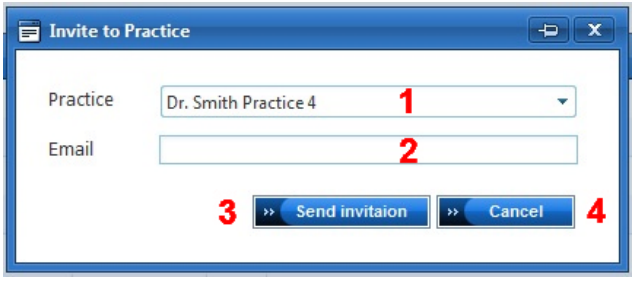
From **Manage Practice** menu you can:

- Invite colleague to the practice by clicking **Invite to Practice**
- Manage practice information by clicking on **Practice Info**
- Manage **Practice Users**

4.1 Invite to Practice

To send email invitation to a colleague to join your practice on *CB Link,* click on **Invite to Practice** within *Manage Practice* section of the Menu (as shown in the picture)

Invite to Practice window will pop up (in picture below) for you to specify a practice and email the invitation.



After setting the practice name (marked with 1) and entering email address of invitation recipient (marked with 2), send invitation to the address specified in the text box (above) by clicking on the button **Send Invitation** (marked with 3). A message with following content will be sent:

> Hi,
>
> You have been invited by <Name of Inviter> to join his/her practice on http://www.CBLink.com.au.
>
> *CB Link* is a web-based service designed to complement point-of-care medical imaging systems by providing point-of-expertise viewing and interpretation tools. Primary components include online multiplanar image viewing, offsite data storage, administrative reporting tools, and teleradiology workflow.
>
> Once registered, you will be able to remotely review your clinical cases.
>
> Registration will take less than 5 minutes and is free of charge.
>
> To register, please go to: http://www.CBLink.com.au/Administration/Registration.aspx.
>
> Best regards,
> CB Link

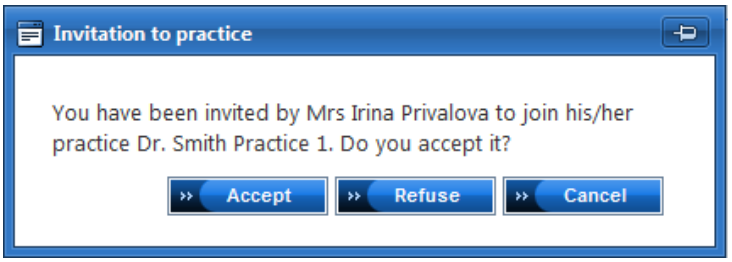
To cancel initiation of sending invitation, click on the **Cancel** button (marked with 4)

Invitation to a new user

If invitation sent to still not registered user, upon registration invited person will be automatically assigned to the specified practice.

Invitation to existing user

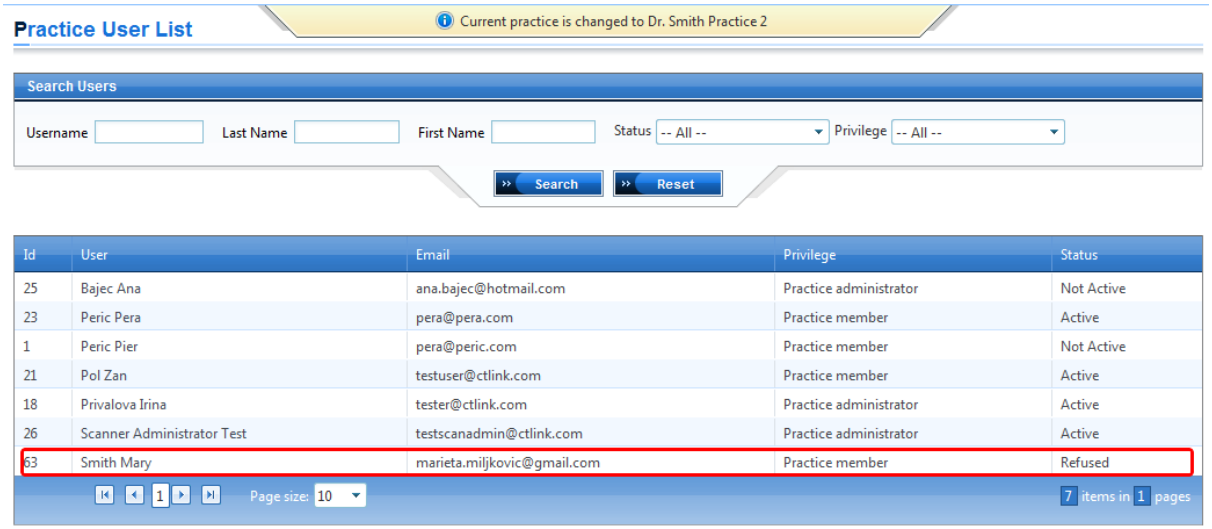
If invitation to join a practice is sent to an existing *CB Link* user, next time he logs in to *CB Link* portal, a window (in a picture below) will pop up informing him of invitation.



CB Link user can:

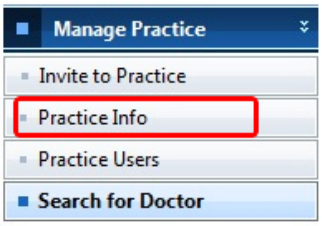
- Accept invitation by clicking on the **Accept** button
- Refuse invitation by going to the **Refuse** button
- Postpone decision for later, by clicking on the **Cancel** button

Practice Manager will be able to track invitation responses for specific practice in the *Practice Users* page (as shown marked red in the picture below)

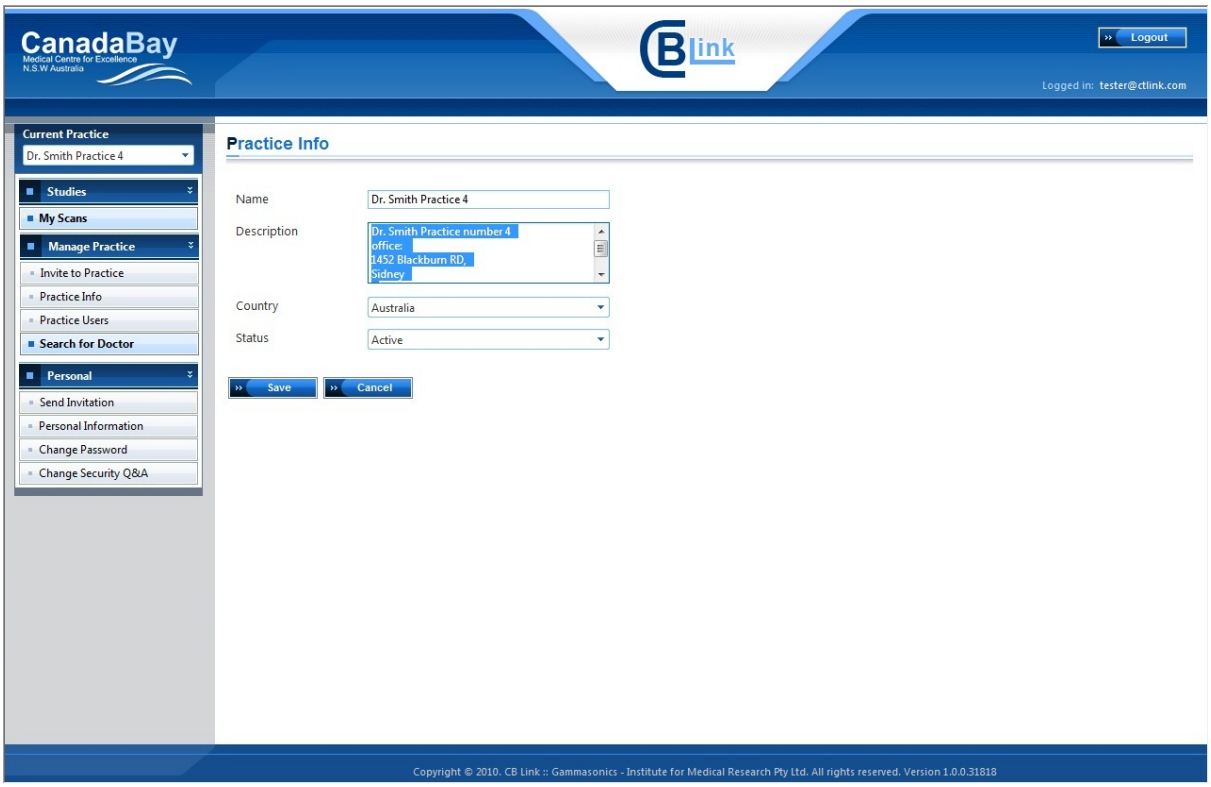


4.2 Practice Info

To update relevant practice information, click on **Practice Info** within *Manage Practice* section of the Menu (as shown in the picture).



The Practice Info page will open.

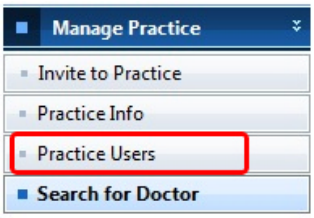


Update the practice information as appropriate, save changes clicking on the **Save** button or cancel modifications clicking on the **Cancel** button.

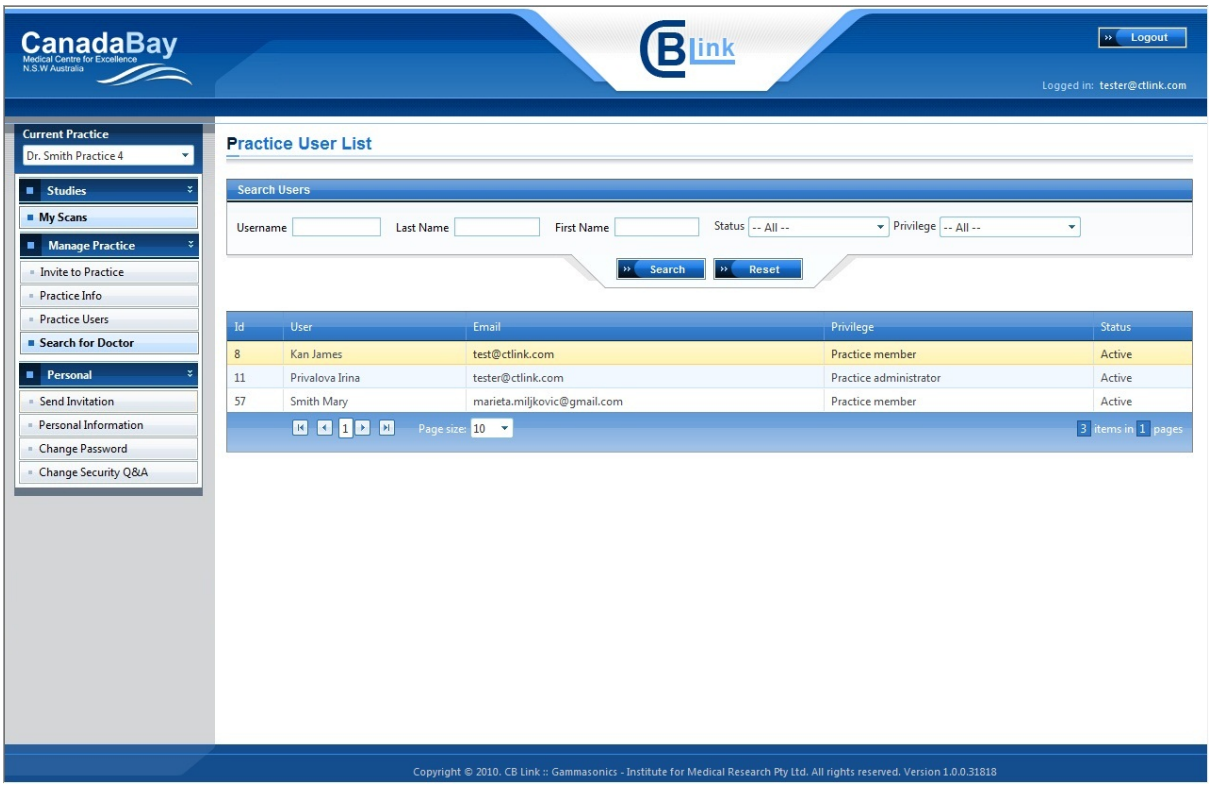
Note: Status of relevant practice can be *Active* or *Not Active*. If practice not active, ii will not be taken into consideration, as if deleted from the portal.

4.3 Practice Users

To access/manage list of users for current practice, click on **Practice Users** within *Manage Practice* section of the Menu (as shown in the picture).



Practice User List will open. On this page you can, as a practice administrator, see all users of the specified practice and search through them.



Note:
Practice User Status can be:

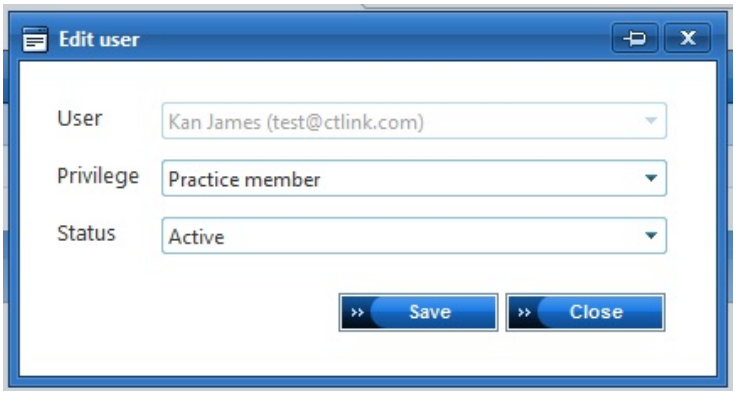
- *Active* - for user active in that practice
- *Not Active* - for user not active in that practice
- *Invited* - for user invited to join specified practice
- *Rejected* - if user decided to reject specified practice invitation

Practice User Privilege can be:

- *Practice Member* - a regular user with no Practice Administration privilege for specific practice. While logged on for that specific practice he will not have a Manage Practice option in his menu.
- *Practice Administrator* - advanced user with Practice Administration privilege to manage specific practice. While logged on for that specific practice he will have a Manage Practice option in his menu.

Edit User

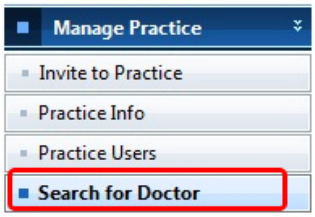
To access a specific Practice User details, click on the name of that user from the list. *Edit User* window will pop up (in picture below).



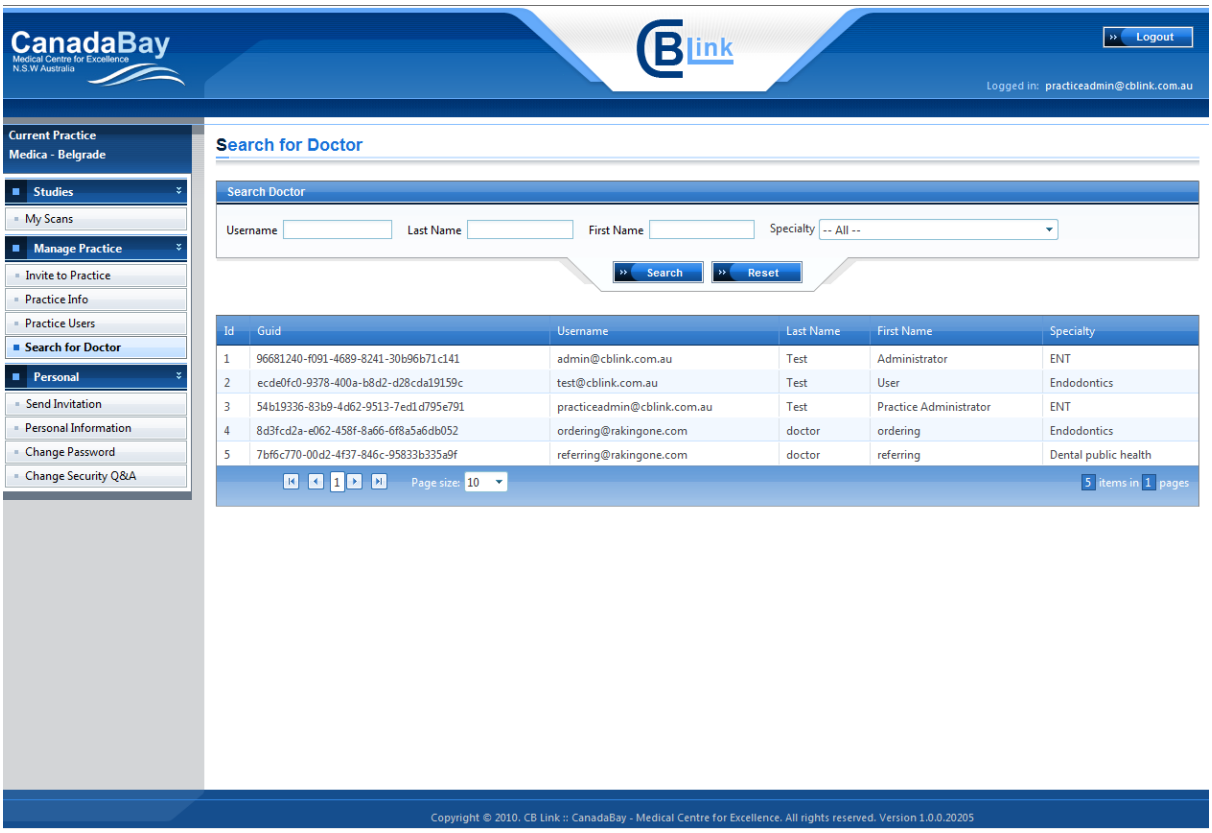
Change Privilege or Status of selected user, update information and save changes by clicking on the **Save** button (in the picture above). To cancel potential changes (before saving) and close *Edit User* window click **Close** button.

4.4 Search for Doctor

To search for a doctor from specific practice, log in as a *Practice Administrator* and click on **Search for Doctor** within *Manage Practice* section of the Menu (as shown in the picture).



Search for Doctor page will open. On this page you can, as a Practice Administrator, see all doctors of the specified practice and search through them.


CanadaBay
Medical Centre for Excellence
N.S.W Australia
CB link
Logout
Logged in: practiceadmin@cblink.com.au
Current Practice
Medica - Belgrade
Studies
My Scans
Manage Practice
Invite to Practice
Practice Info
Practice Users
Search for Doctor
Personal
Send Invitation
Personal Information
Change Password
Change Security Q&A
Search for Doctor
Search Doctor
Username
Last Name
First Name
Specialty
-- All --
Search
Reset
Id
Guid
Username
Last Name
First Name
Specialty
1 96681240-f091-4689-8241-30b96b71c141 admin@cblink.com.au Test Administrator ENT
2 ecde0fc0-9378-400a-b8d2-d28cda19159c test@cblink.com.au Test User Endodontics
3 54b19336-83b9-4d62-9513-7ed1d795e791 practiceadmin@cblink.com.au Test Practice Administrator ENT
4 8d3fcd2a-e062-458f-8a66-6f8a5a6db052 ordering@rakingone.com doctor ordering Endodontics
5 7bf6c770-00d2-4f37-846c-95833b335a9f referring@rakingone.com doctor referring Dental public health
Page size: 10
5 items in 1 pages
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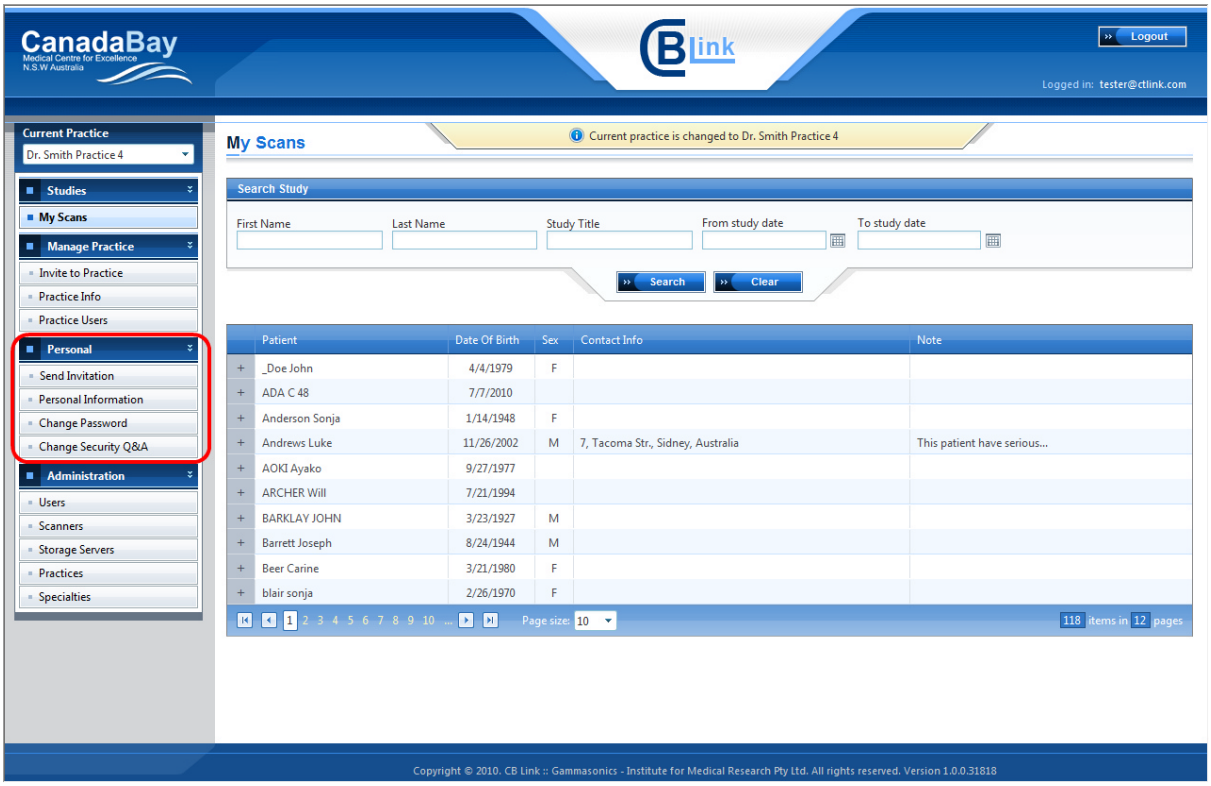
Part V

5 Personal

To access *Personal* pages in *CB Link* portal, go to **Personal** section of the menu (marked with red).



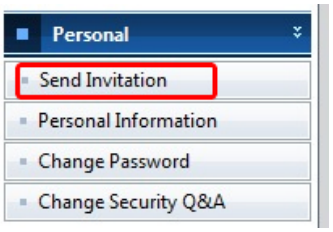
Note: All *CB Link* account roles can access this menu section.

From here you can:

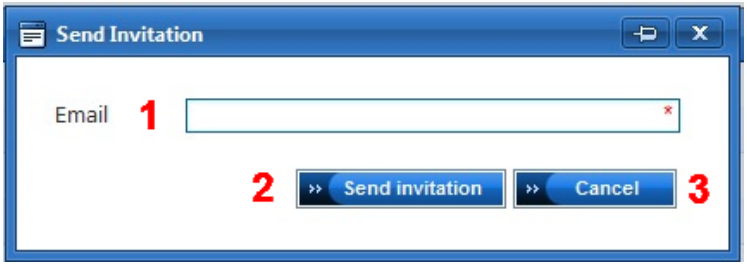
- **Send invitation** to join *CB Link* to a specific email
- Manage personal information by clicking on **Personal Information**
- **Change password**
- **Change security Q&A**

5.1 Send Invitation

To send email invitation to a colleague to join *CB Link,* click on **Send Invitation** within *Personal* section of the Menu (as shown in the picture)



Send Invitation window will pop up (in picture below) for you to enter email address to which you would like to send invitation.



After entering email of an invitation recipient (marked with 1):

- To send email invitation to the address specified in the text box above, click on the button **Send Invitation** (marked with 2). A message with following content will be sent:

  Hi,

  You have been invited by <Name of Inviter> to register on http://www.CBLink.com.au.

  CB Link is a web-based service designed to complement point-of-care medical imaging systems by providing point-of-expertise viewing and interpretation tools. Primary components include online multiplanar image viewing, offsite data storage, administrative reporting tools, and teleradiology workflow.

  Once registered, you will be able to remotely review your clinical cases.

  Registration will take less than 5 minutes and is free of charge.

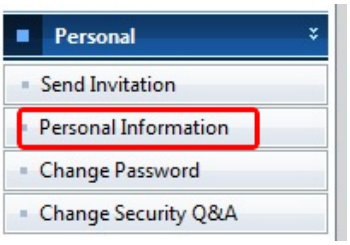
  Please, go to: http://www.CBLink.com.au/Administration/Registration.aspx.

  Best regards,
  CB Link

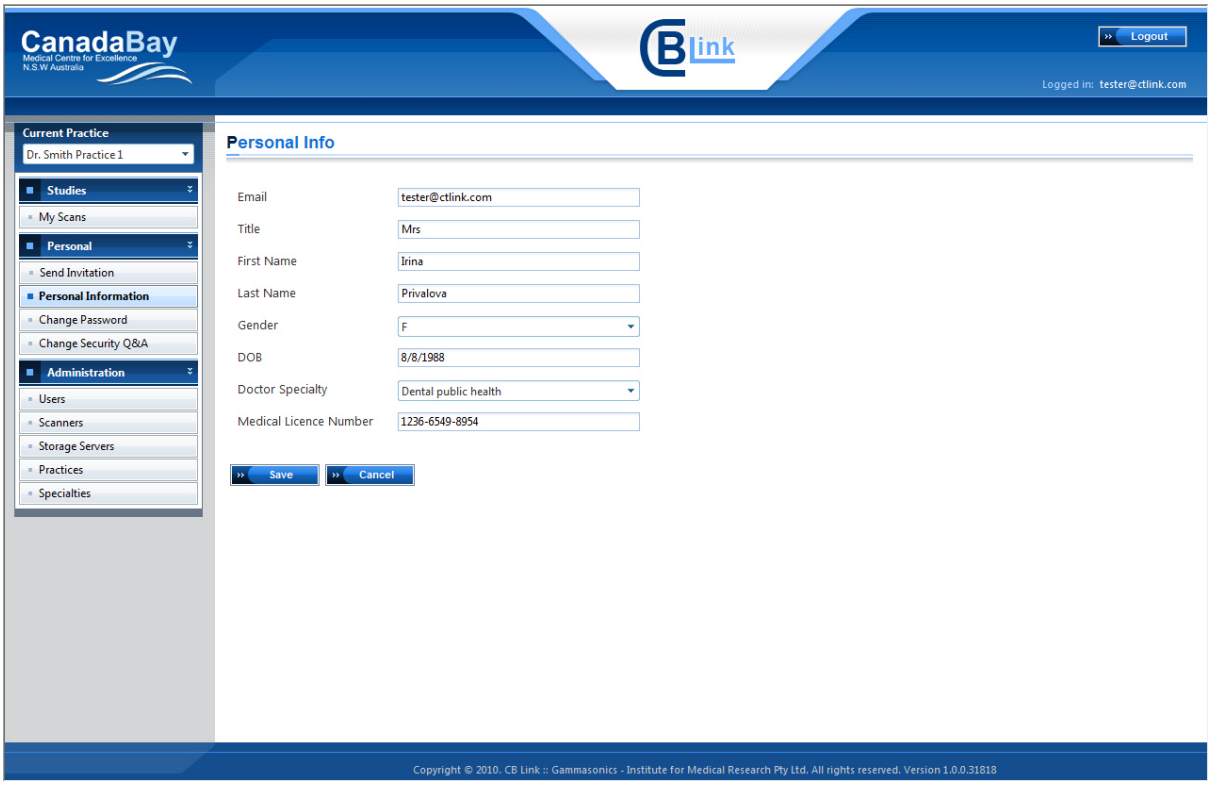
- To cancel initiation of sending invitation, click on the **Cancel** button (marked with 3).

5.2 Personal Information

To update your personal information, click on **Personal Information** within *Personal* section of the Menu (as shown in the picture).



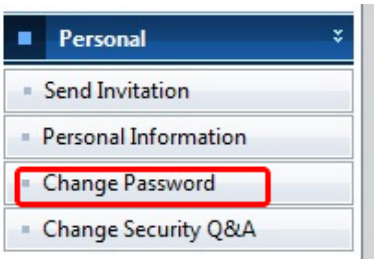
The Personal Info page will open.



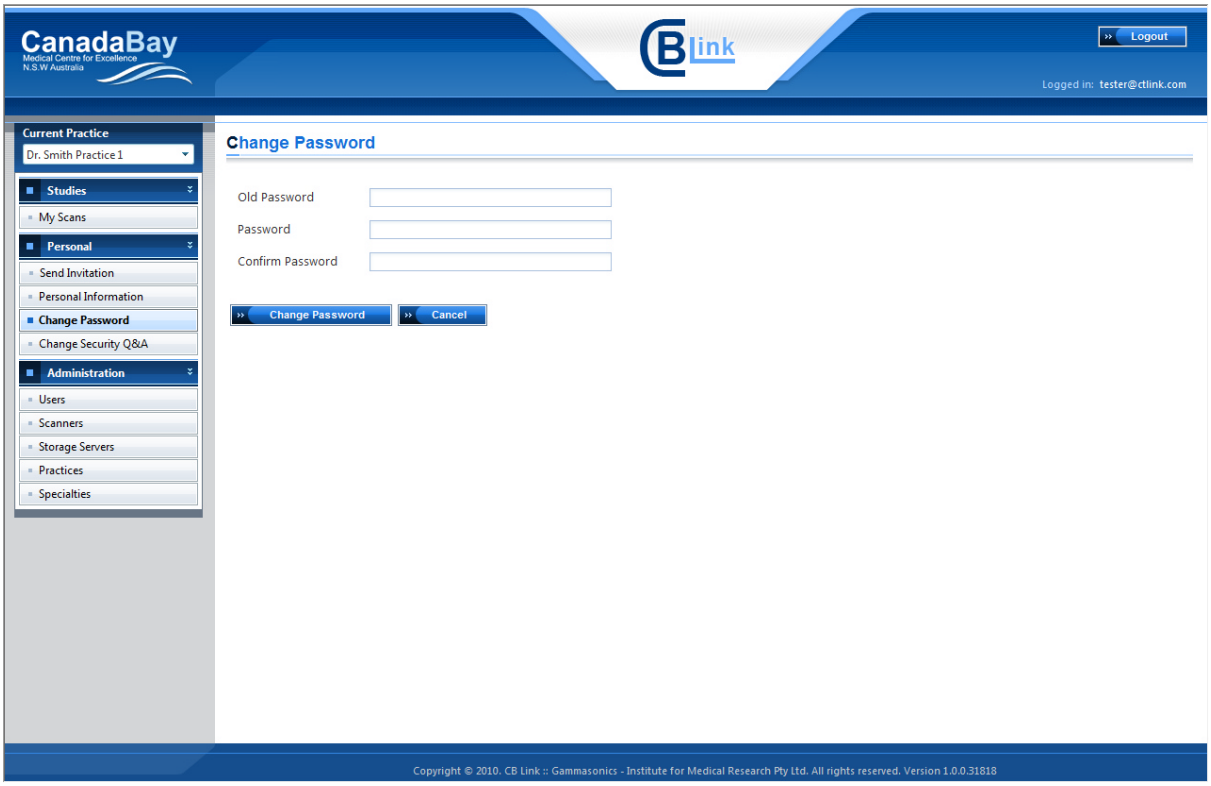
Update your information as appropriate and save changes clicking on the **Save** button or cancel modifications clicking on the **Cancel** button.

5.3 Change Password

To change your *CB Link* account password click on **Change Password** within *Personal* section of the Menu (as shown in the picture).



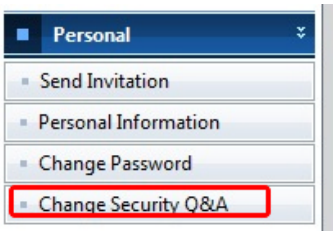
After entering an old and new password (with confirmation) as shown in the picture below, to change password, click on the **Change Password** button or cancel the changes clicking on the **Cancel** button.



Note: According to *CB Link* password policy, password should have:
- length 5-15 characters
- at least one numeric character

5.4 Change Security Q&A

To change security question and answer for your *CB Link* account, click on **Change Security Q&A** within *Personal* section of the Menu (as shown in the picture).



After entering your password (as shown in the picture below), to change security question and answer, insert the new values and click on the **Change Security Answer** button or cancel the changes clicking on the **Cancel** button.

Part VI

6 Administration

To access *Administration* pages in *CB Link* portal, go to **Administration** section of the menu (marked with red).

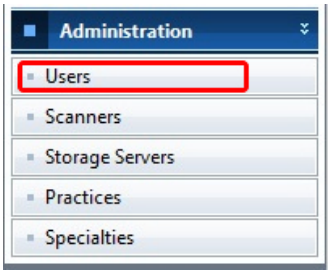
Note: A simple user, which is not a CB Link Administrator will not have access to Administration section of the Menu.

From *Administration* menu you can:

- Manage CB Link **Users**
- Manage CB Link **Scanners**
- Manage **Storage Servers**
- Manage **Practices**
- Manage **Specialties** list

6.1 Users

To manage *CB Link* users, click on **Users** within *Administration* section of the Menu (as shown in the picture).

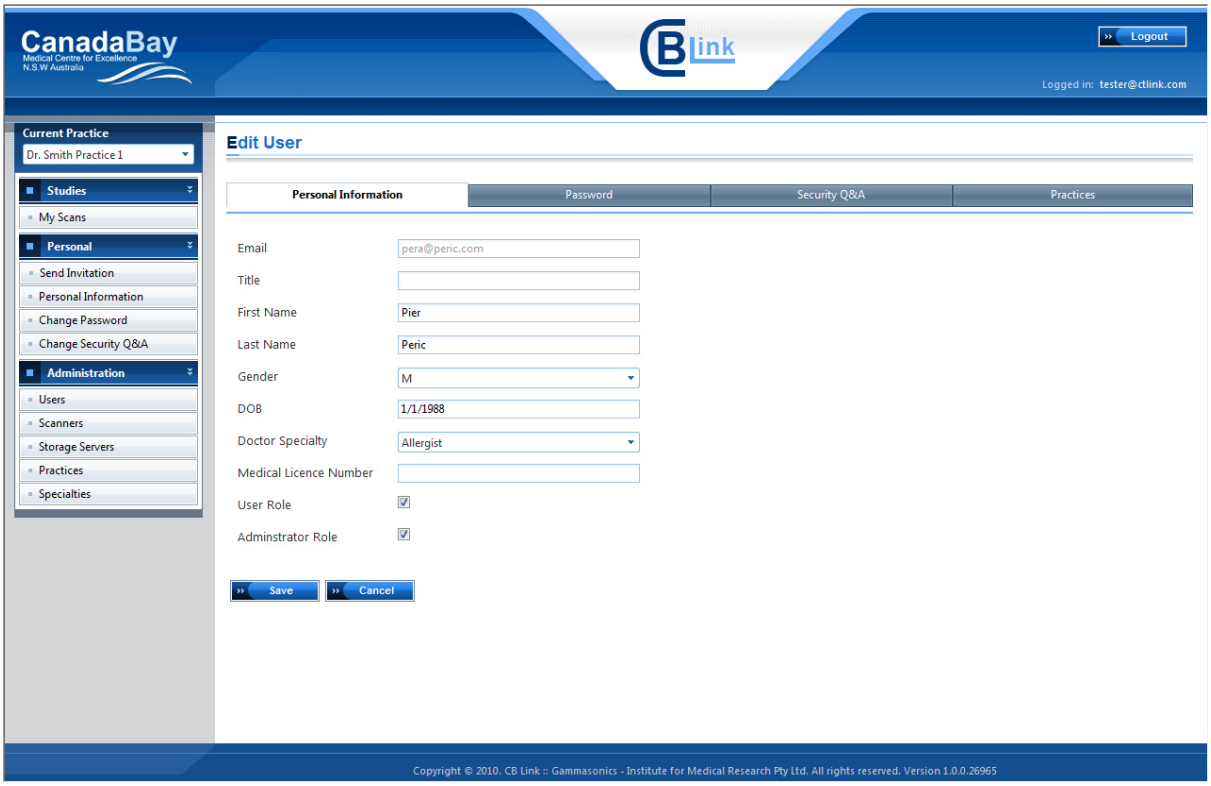


The User List will open (picture below). As a *CB Link Administrator,* on this page you can see and search list of all users defined in *CB Link* portal (including not active users) .

Edit User

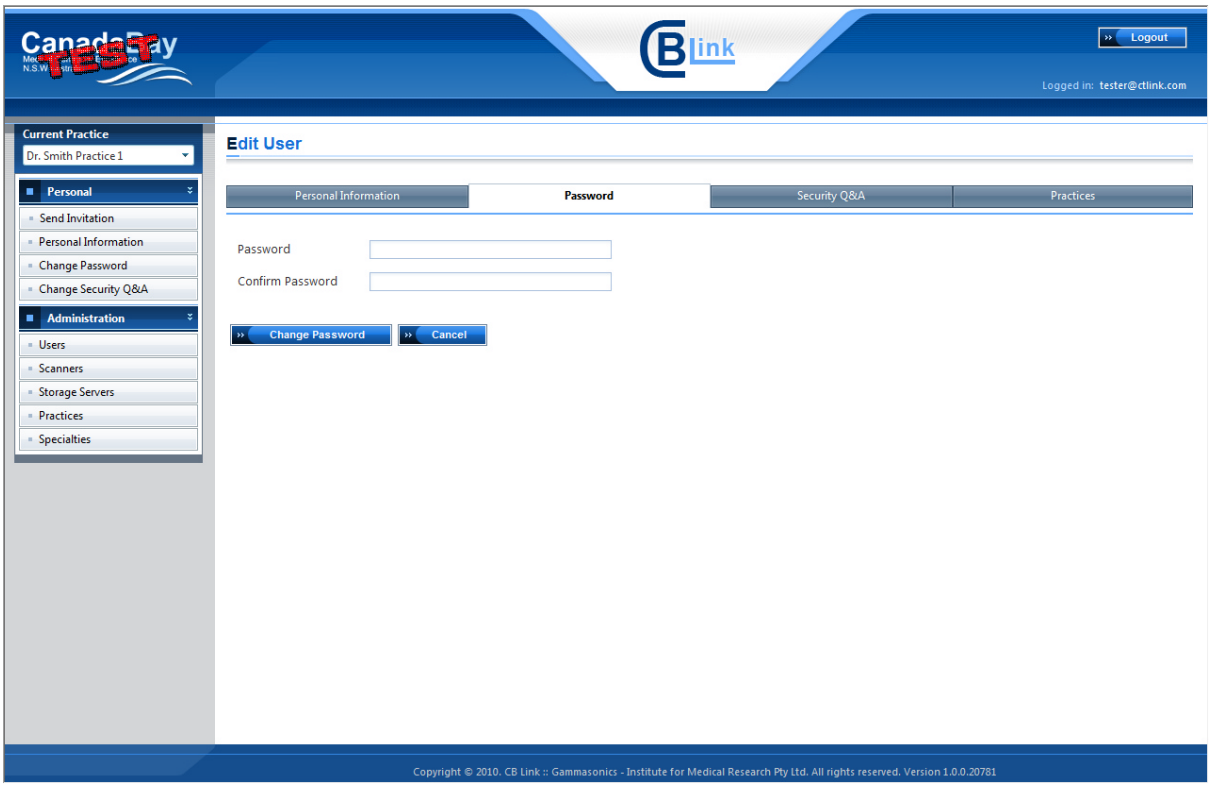
To access/update a specific user details, click on username from the list. *Edit User* page will open (picture below). All user information in this page are presented in four tabs:

- Personal Information (open as default *Edit User* tab)
- Password
- Security Q&A
- Practice

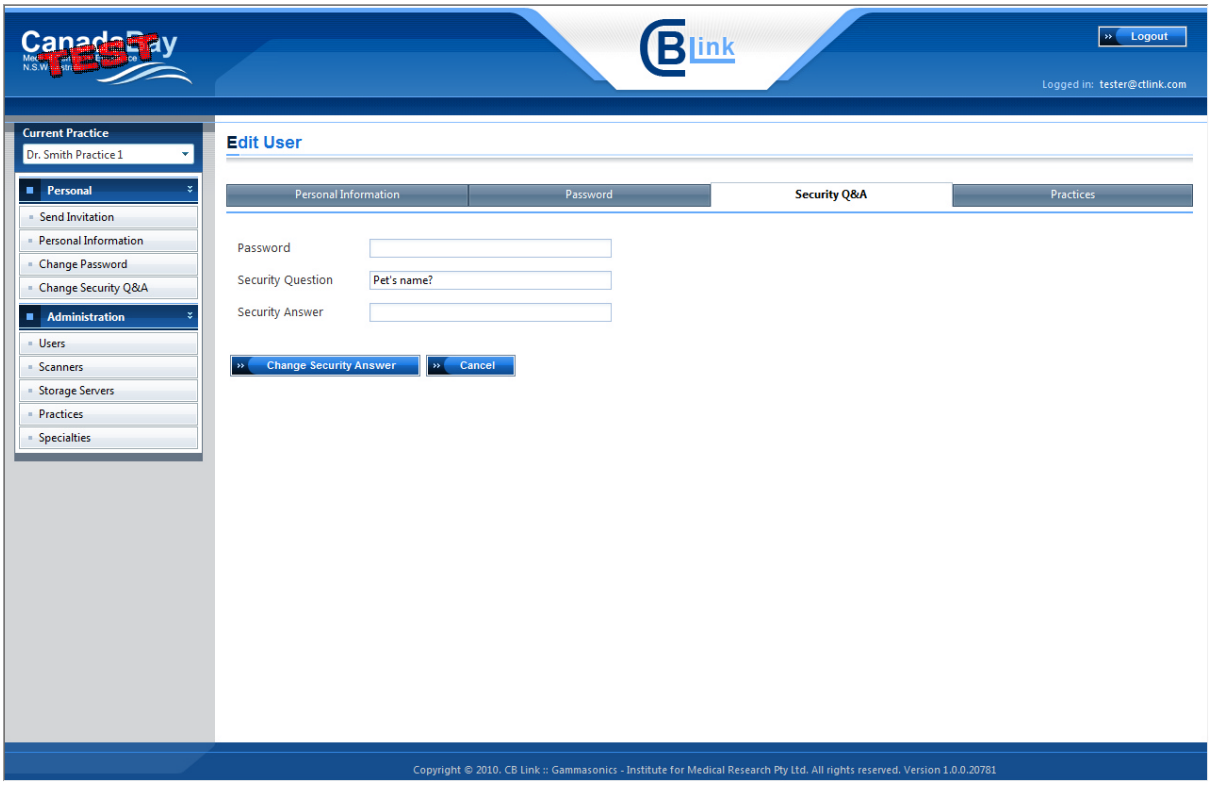


In *Personal Information* tab, *CB Link Administrator* can modify any personal information about the user (also see section *Personal*, *Personal Information*). Additionally, in this tab administrator can set roles for any selected user:

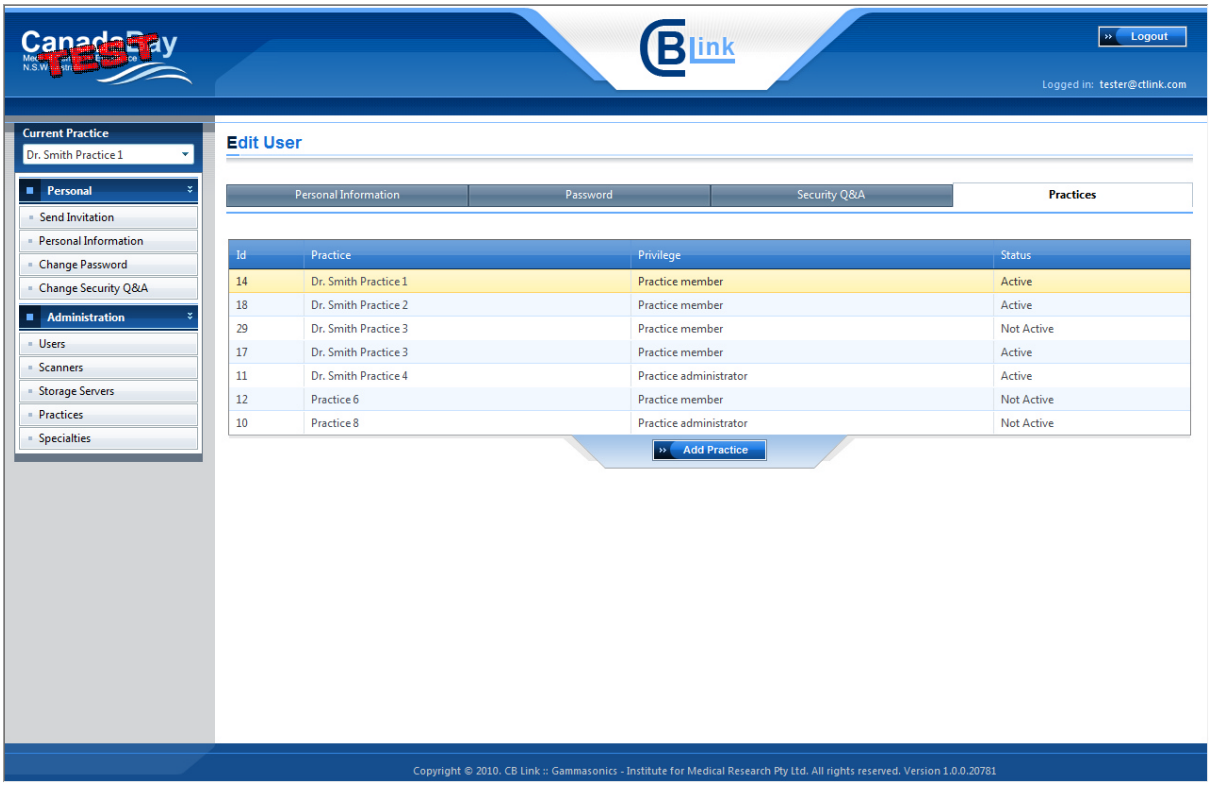
- *User role - CB Link* user can access *Studies* and *Personal* section (and *Manage Practice* if he is *Practice Administrator*)
- *Administrator role - CB Link* Administrator can additionally access *Administration* section to manage users, scanners, storage servers, practices and specialties



In *Password* tab (picture above) *CB Link* Administrator can change password of any selected user (also see section *Personal*, *Change Password*).



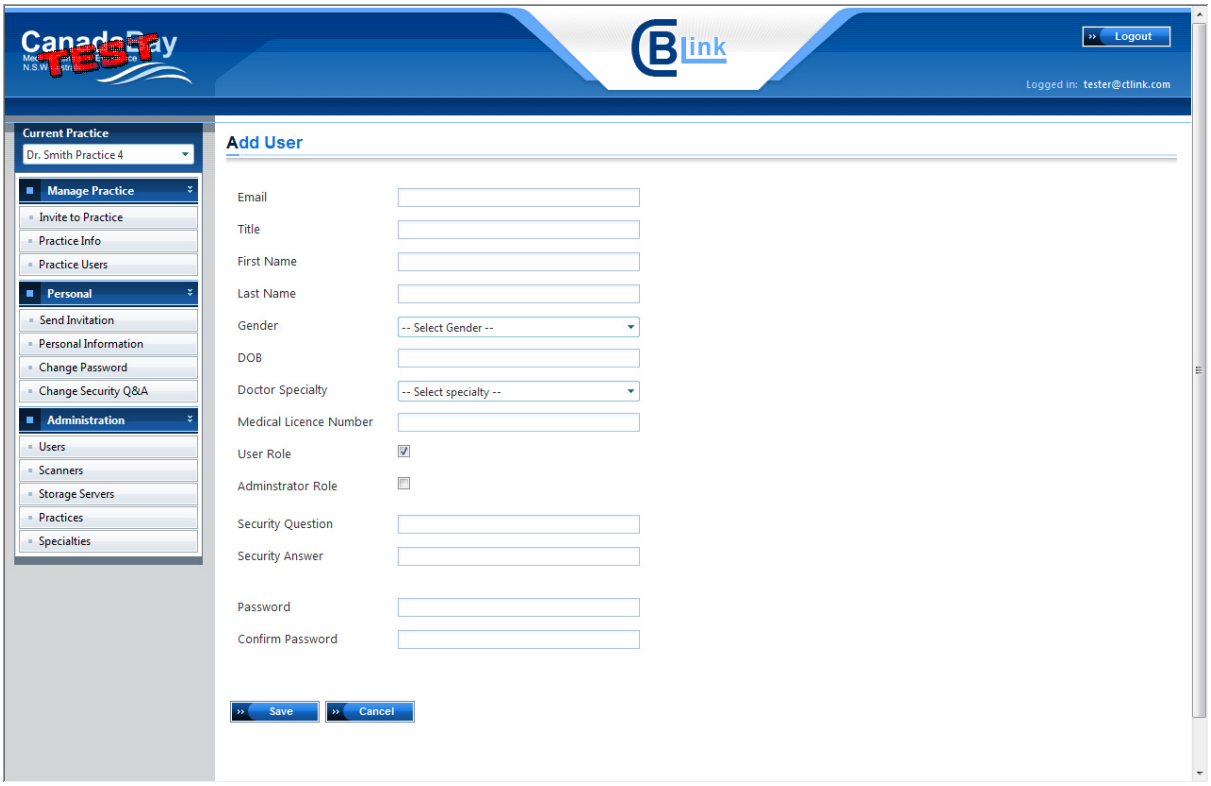
In *Security Q&A* tab (picture above), *CB Link* Administrator can set security question and answer for any user.



In *Practices* tab, *CB Link* Administrator can access list of all practices relevant for selected user. Administrator can manage relevant user role for any selected practice from the list (also see section *Manage Practices, Practice Users*).

Add User

After clicking on the **Add User** button at the bottom of *User List* (*Users* section in *Administration* menu), the Add User page will open (picture below)



To add a new user, *CB Link* Administrator will enter all relevant user information, set his roles, security information and password and go to the **Save** button. To cancel user insertion (before saving) Administrator can click the **Cancel** button.

Note: *To map CB Link User to the existing doctor in CT Premium, please contact Medica technical support at support@medicaproducts.com*

6.2 Scanners

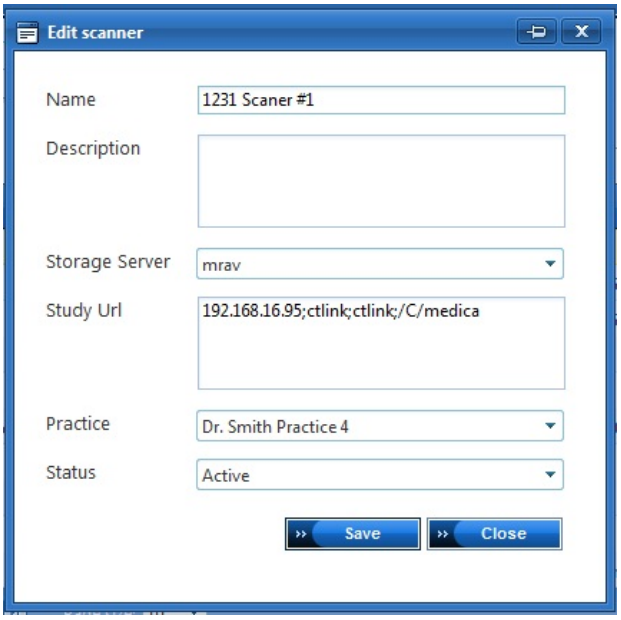
To manage scanners in *CB Link* portal, click on **Scanners** within *Administration* section of the Menu (as shown in the picture).

The Scanner List will open (picture below). As a *CB Link Administrator,* on this page you can see list of

all scanners defined in *CB Link* portal.

Edit Scanner

To access/update a specific scanner details, click on the name of that scanner from the list. *Edit Scanner* window will pop up (in picture below).

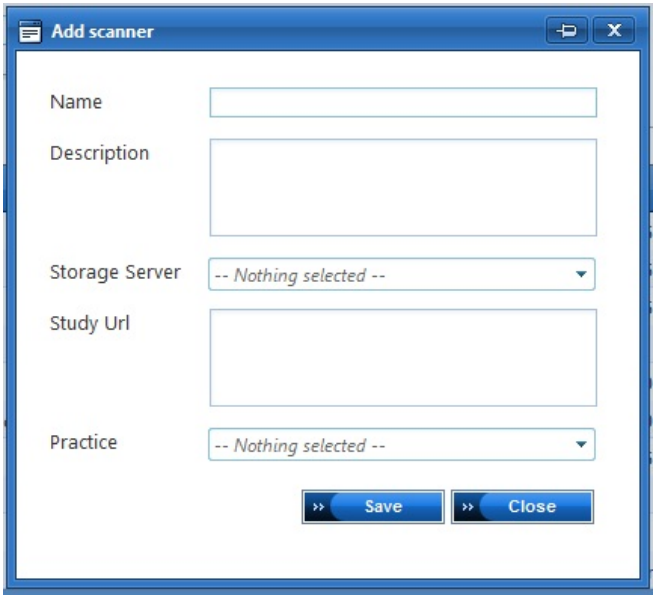


After updating scanner information save changes by clicking on the **Save** button (in the picture above).

To cancel potential changes (before saving) and close *Edit Scanner* window click the **Close** button.

Add Scanner

To add a new scanner to the list, click on the **Add Scanner** button in the *Scanner List* page. *Add Scanner* window will pop up (in picture below). Insert new scanner details and save changes by clicking on the **Save** button (in the picture below). To cancel potential changes (before saving) and close *Add Scanner* window, click the **Close** button.

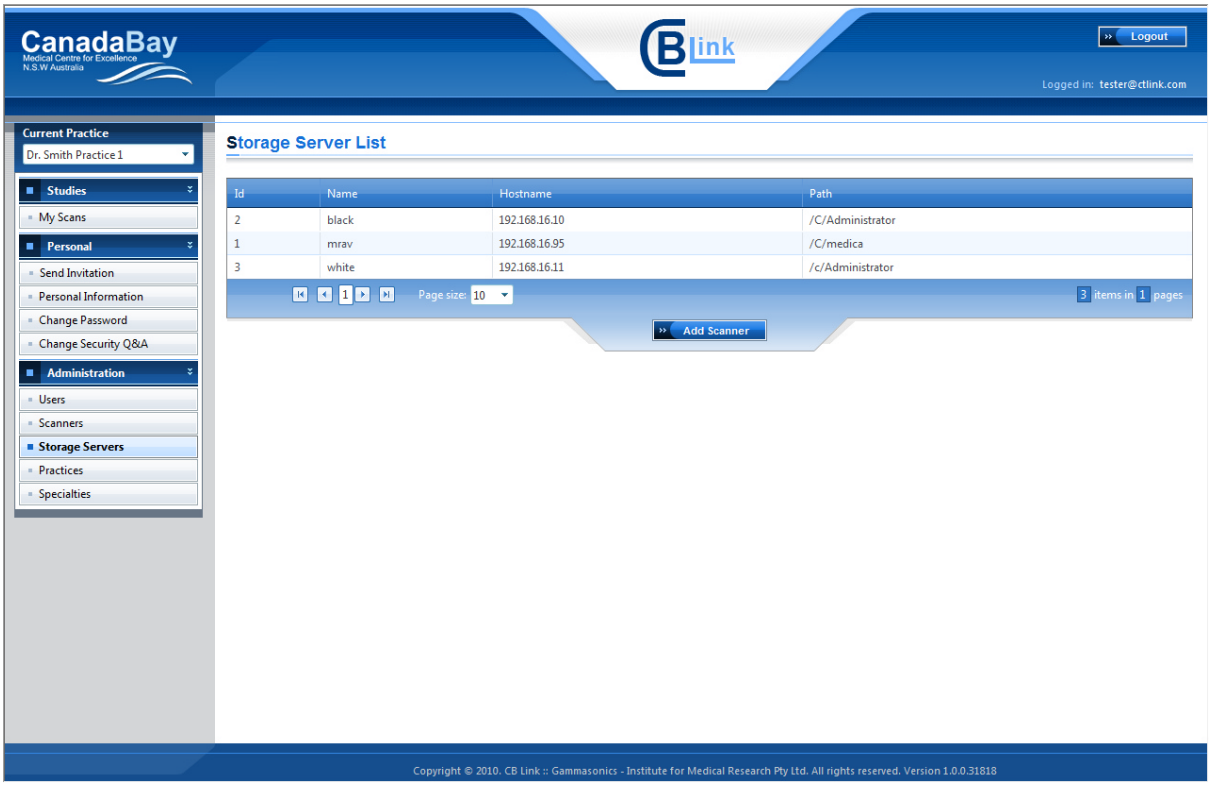


Note: A new scanner should be added only with *CT Premium* installation. If needed, to map a scanner with to the existing one with *CT Premium*, please contact our Medica technical support at support@medicaproducts.com.

6.3 Storage Servers

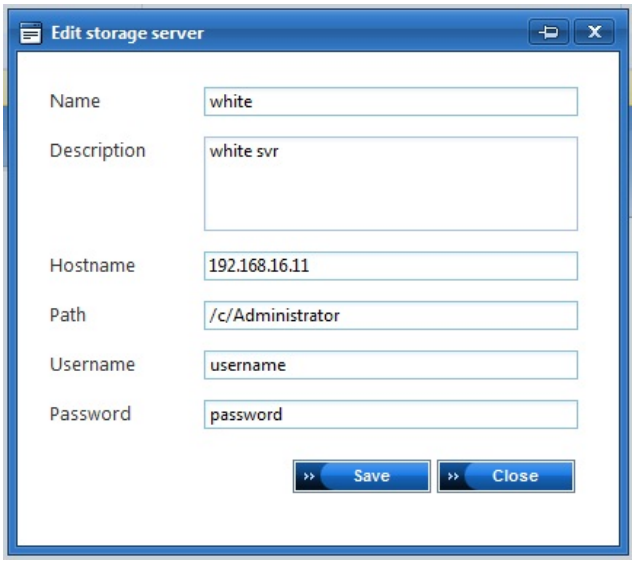
To manage storage servers in *CB Link* portal, click on **Storage Servers** within *Administration* section of the Menu (as shown in the picture).

The Storage Server List will open (picture below). As a *CB Link Administrator,* on this page you can see list of all storage servers defined in *CB Link* portal.



Edit Storage Server

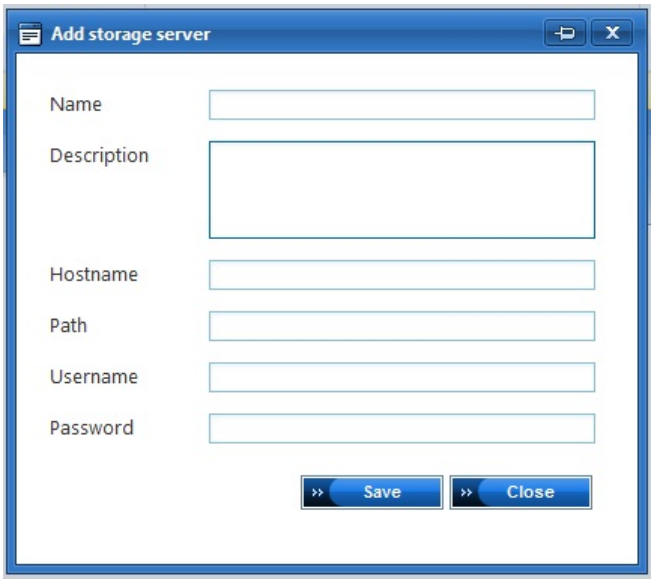
To edit a specific storage server details, click on the name of that server from the list. *Edit Storage Server* window will pop up (in picture below).



After updating server information save changes by clicking on the **Save** button (in the picture above). To cancel potential changes (before saving) and close *Edit Storage Server* window click the **Close** button.

Add Storage Server

To add a new storage server to the list, click on the **Add Server** button in the Storage Server List page . *Add Storage Server* window will pop up (in picture below). Insert new server details and save changes by clicking on the **Save** button (in the picture below). To cancel potential changes (before saving) and close *Add Storage Server* window, click the **Close** button.



6.4 Practices

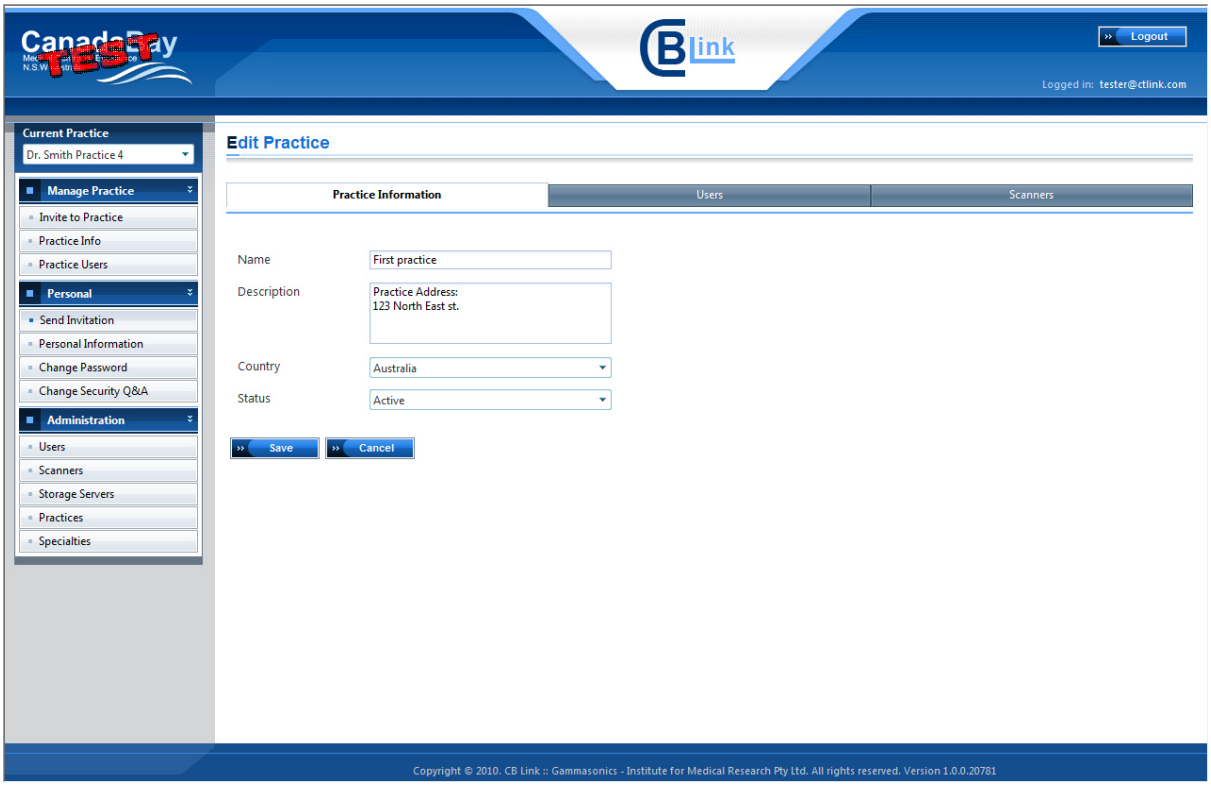
To manage practices in *CB Link* portal, click on **Practices** within *Administration* section of the Menu (as shown in the picture).

The Practice List will open (picture below). As a *CB Link Administrator,* on this page you can see and search list of all practices defined in portal (including not active practices) .

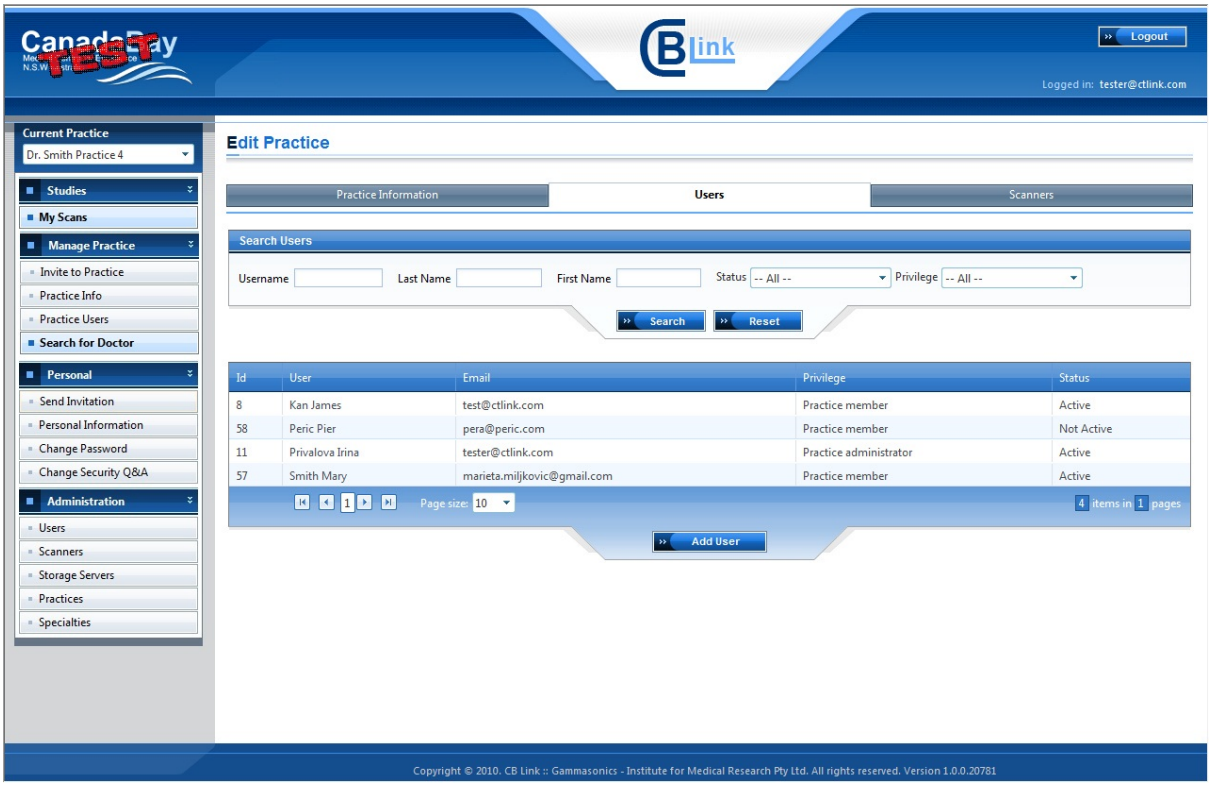
Edit Practice

To access/update a specific practice details, click on the name from the list. *Edit Practice* page will open (picture below). All practice information in this page are presented in three tabs:

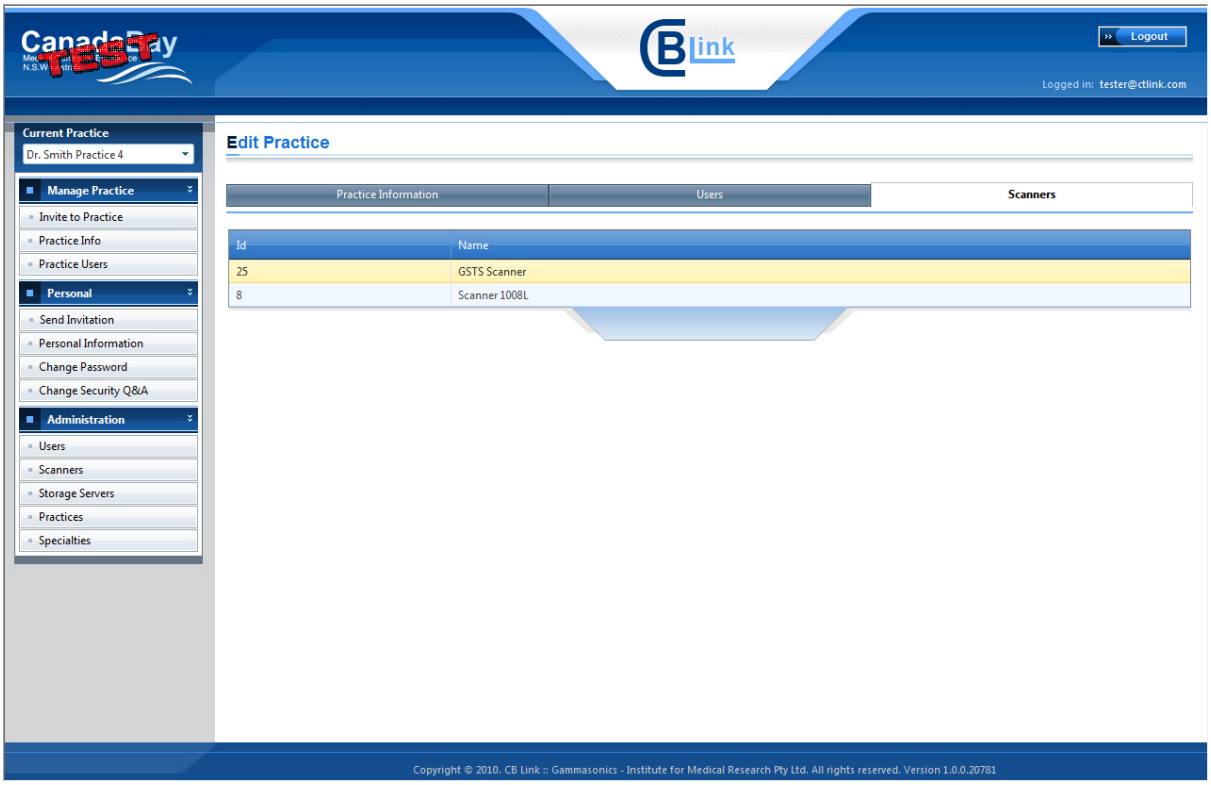
- Practice Information (open as default *Edit Practice* tab)
- Users
- Scanners



In *Practice Information* tab, *CB Link Administrator* can modify any information about the practice (also see section *Manage Practice*, Practice *Info*), including practice status.



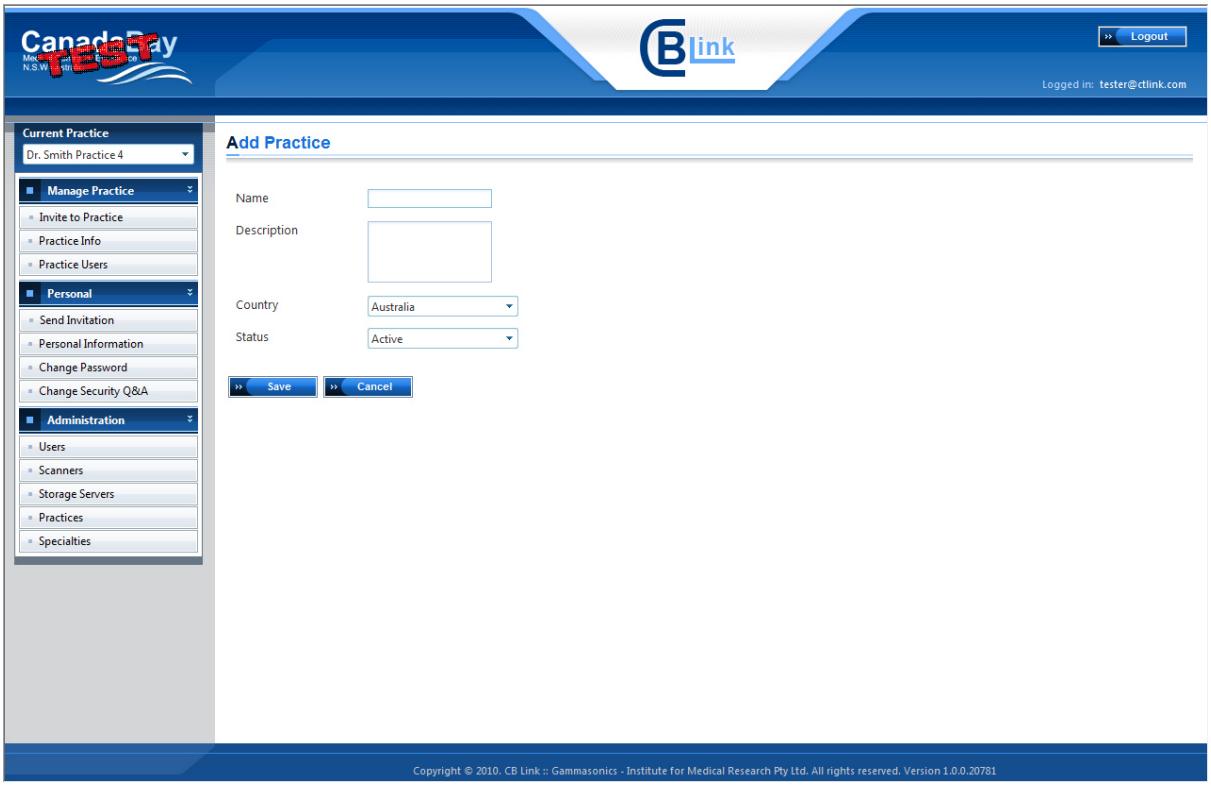
In *Users* tab (picture above) *CB Link* Administrator can manage users and their roles for relevant practice (also see section *Manage Practice*, *Practice Users*).



In *Scanners* tab (picture above), *CB Link* Administrator can see list of scanners for selected practice.

Add Practice

After clicking on the **Add Practice** button at the bottom of *Practice List* (*Practices* section in *Administration* menu), the Add Practice page will open (picture below)



To add a new user, *CB Link* Administrator will enter all relevant practice information, set practice status and go to the **Save** button. To cancel practice insertion (before saving) Administrator can click the **Cancel** button.

6.5 Specialties

To manage list of specialties in *CB Link* portal, click on **Specialties** within *Administration* section of the Menu (as shown in the picture).

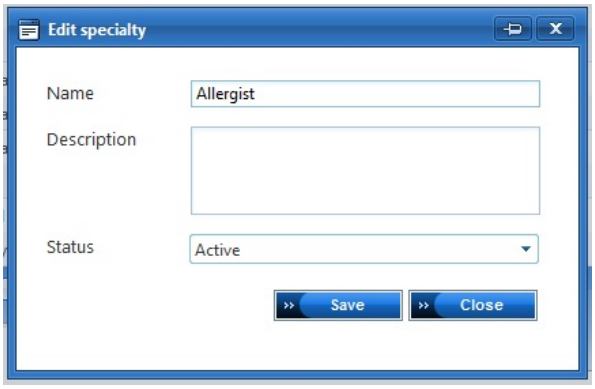
The Specialty List will open (picture below). As a *CB Link Administrator,* on this page you can see list of all specialties defined in *CB Link* portal.

Note:
Specialty Status can be:

- *Active* - for specialties currently active in the portal
- *Not Active* - for specialties that should not be displayed in the Specialty List presented to *CB Link* user. This is alternative of removing existing specialty from the list, equivalent to deletion of that specialty.

Edit Specialty

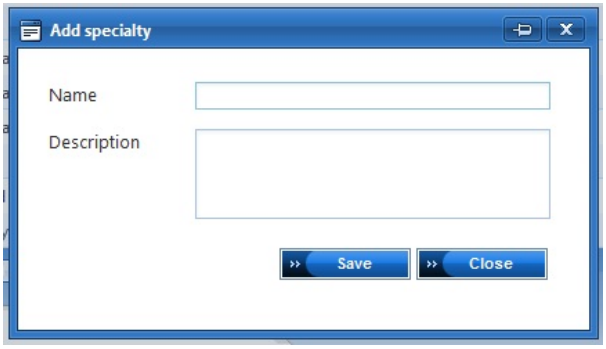
To access/update a specific specialty details, click on the name of that specialty from the list. *Edit Specialty* window will pop up (in picture below).



Change specialty details (Name, Description) or specialty Status, update information and save changes by clicking on the **Save** button (in the picture above). Cancel potential changes (before saving) and close *Edit Specialty* window by clicking **Close** button.

Add Specialty

To add a new specialty to the list, click on the **Add Specialty** button (at the bottom of Specialty List page). *Add Specialty* window will pop up (in picture below).



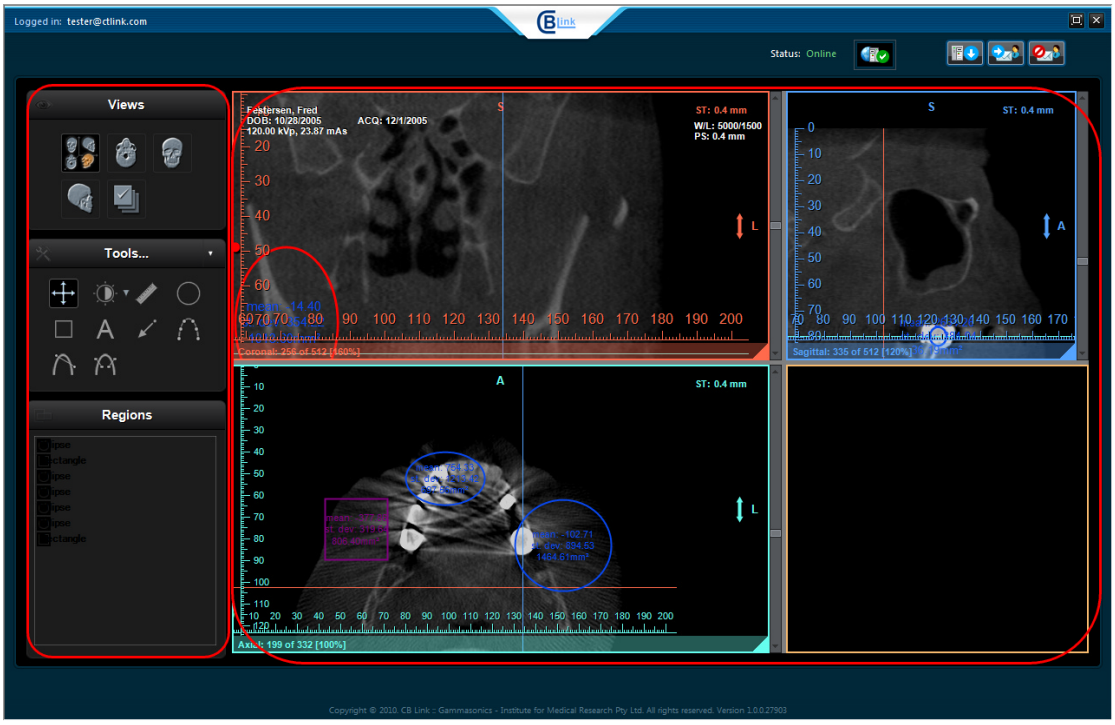
Insert specialty details (Name, Description) and save changes by clicking on the **Save** button (in the picture above). To cancel potential changes (before saving) and close Add *Specialty* window click **Close** button.

Part VII

7 Study Viewer

Main components of *CB Link Study Viewer* are:

- Panels group (Views panel, Tools panel, Regions panel)
- The Viewing panel



The changes made in the Study Viewer (window/level, zoom, position, filter, rotation, drawn regions, selected view, etc.) will be saved and applied to the study when it's opened again. The only exception is the Show 3D option from the Tools context menu. This option needs to be activated manually.

7.1 The MPR View

The MPR view is a default view and when study is opened for the first time, this view will be selected and displayed. Selecting the MPR view is done by clicking the MPR button in the Views panel. It contains four different panels:

- Axial
- Coronal
- Sagittal
- 3D Panel

The Axial panel shows axial frames. This is the only panel where Panoramic, Oblique and TMJ regions can be drawn. Except from that these panels behaves the same as Coronal or Sagittal panel.

The Axial, Coronal and Sagittal show all frames of the corresponding frame type. The scroll bar on the right side of each view enables scrolling through frames.

The 3D panel is initially empty. 3D viewing is enabled from the tools context menu.

When the Display 3D item is clicked a progress bar will appear in the 3D view, showing progress of 3D opening. When slices downsampling is done a 3D image will be shown and the 3D View button will be added to the View panel.

The 3D Panel allows 3D model rotation, zoom in and out, changing Window/Level settings, changing the applied palette, and quick navigation.

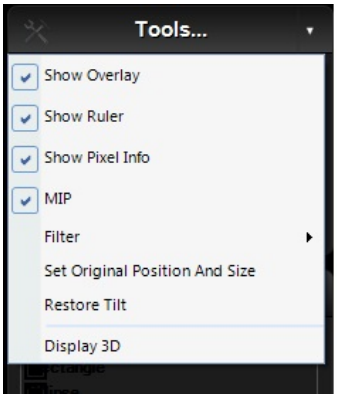
The rotation is performed by clicking and dragging the model to the desired angle and position.

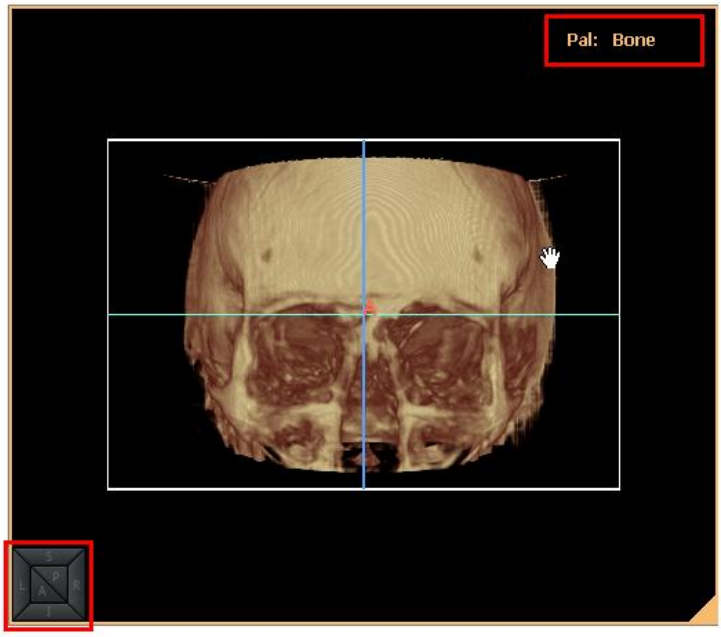
The zoom in and zoom out operations are enabled via left/right clicking.

The viewing palette can be changed by selecting the desired palette from the palette combo box. When moving the mouse pointer above the currently selected palette value the Palette combo box will show available palettes (Bone, Skin, Skin Red, Default, Default 2m and ISI).

Quick navigation buttons enable quick positioning of the 3D model. The button letters stand for:

- L = Left Lateral
- R = Right Lateral
- A = Anterior
- P = Posterior
- S = Superior
- I = Inferior





7.2 The Axial, Coronal and Sagittal Views

The Axial view is opened when the Axial view button from the Views panel is pressed. All Axial frames will be shown in this view in a matrix form. Window level changing is supported in this view, but changes made in one of these views will affect other two views.

Pitch, slice thickness, position, scroll position and column number can be set, individually for each view. These values will be saved when current study is closed.

7.3 Selected View

Selected view type shows all selected images. It shows the Columns button where number of columns can be set. The Pan tool is available in this tool.

7.4 3D View

This view shows 3D model, same as one available in the MPR view as an independent view.

7.5 Tools Panel

The main components of *Tools Panel* are:

- Pan
- W/L
- Distance
- Rectangle
- Ellipse
- Text
- Label
- Panoramic
- Oblique
- TMJ
- The Tools context menu.

The *Pan tool* is a default tool. When the tool is selected, the application allows the user to drag/drop study images within their parent view, thus changing the position of the images. Also, the application allows the user to zoom in / zoom out the images, and to drag / drop the horizontal and vertical hairlines of the displayed images.

To move image to new position make sure that pan tool is selected, and position the mouse pointer above the desired image. Left click and drag / drop the image to the desired position.

To zoom in / zoom out left click / right click above the image.

The *W/L or Window/Level* tool is used to set window and level of the displayed images in one of the available views. The Window/Level changes made in one of the views will affect all views. If W/L is changed in the Axial view, this action will affect Coronal and Sagittal views as well, and vice versa. Changes in one of the view panels in the MPR view will affect Axial, Coronal, and Sagittal panels, and the Axial, Coronal and Sagittal views.

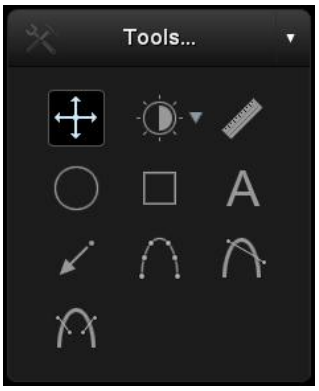
The Window/Level context menu allows selection of predefined values, creating new and deleting old values, and saving current values. The W/L context menu can be opened by clicking the arrow shaped button next to the W/L tool. The Context menu will show all predefined values, and it will show Edit current window level and Save current window level items. To apply one of predefined values just select it from the list.

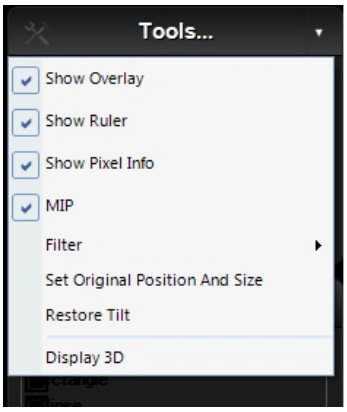
Tools context menu is displayed when clicking the tools button at top of the Tools panel. It contains the following options:

- Show ruler – when enabled, all viewing panels will display horizontal and vertical rulers, and vice versa.

- Show overlay – when enabled, the application will display overlay (rulers, patient info, and hairlines) on all viewing panels.
- Show pixel info – when enabled, the application will show HU values of the pixels according to the position of the mouse pointer.
- MIP – when enabled, the application will display all study frames with Maximum Intensity Projection (MIP).
- Filter – gives a list of filters that can be applied to displayed frames. Selecting a filter from the list will automatically change the frame display.
- Restore position and size – clicking this option restores the position and zoom of the displayed frames to the original setting (100% zoom and the frame is positioned in the top left corner).
- Restore original tilt – clicking this option restored the original study tilt.
- Load region of interest – enables importing predefined ROI file and applying study viewing settings as defined in the imported file.
- Save region of interest – enables saving current study viewing settings into a ROI file.
- Open 3D / Close 3D – enables / disables 3D viewing.
- Viewing settings – clicking this option displays a dialog box used for defining various study viewing settings (default regions' colors, names, captions, etc.).

The first two options are enabled by default.

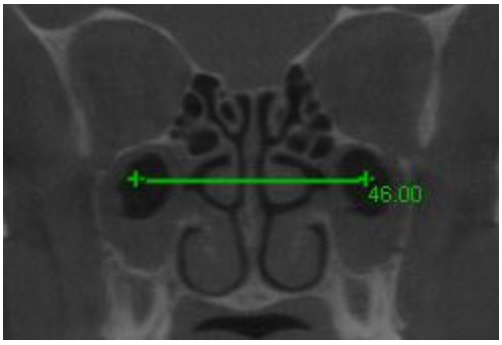




The Distance tool enables drawing measuring region on study slices. To draw the region, mark the position of start and end points between which the line should be drawn. The region can be drawn on all viewing panels, with exception of 3D and Selected slices views. The region will display its length, measured in millimeters. The region will be visible only on the slice on which it was drawn. The region has the following edit options, accessible through the region's context menu:

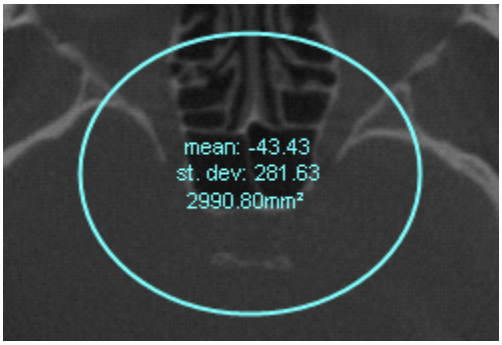
- Go to region
- Visible

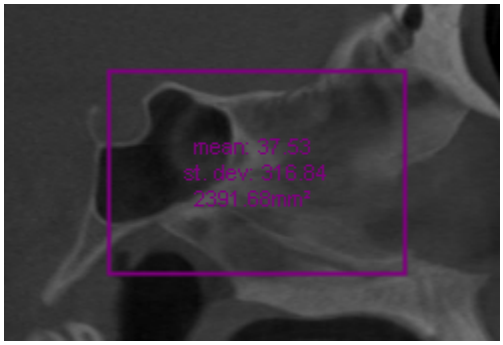
- Change name
- Change color
- Delete
- Delete all regions



The Ellipse and Rectangle tools enable drawing ellipse/rectangle shaped region on study slices. To draw the region, mark the position of two points defining a rectangle that will border the resulting region. The region can be drawn on all viewing panels, except from 3D and Selected slices views. The region shows the medium (average) value and the standard deviation of HU values of the pixels contained by the region. The area of the region is also displayed, measured in square millimeters. The region will be visible only on the slice on which it was drawn. The region has the following edit options, accessible via region's context menu:

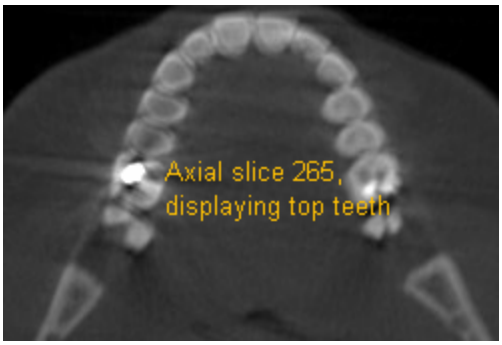
- Go to region
- Visible
- Change name
- Change color
- Set water attenuation coefficient
- Delete all regions
- Delete





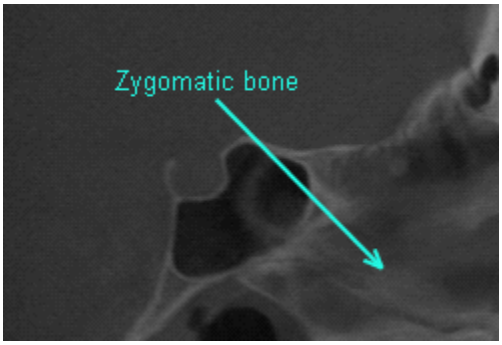
The Text tool enables drawing of text display region. To draw the region, mark the position of the two points that will define a rectangular border of the region. The region can be drawn on all viewing panels, with exception of 3D and Selected slices views. The region will initially show default text. The region's text can be changed using the Edit caption option. The region will be visible only on the slice on which it was drawn. The region has the following edit options, accessible through the region's context menu:

- Go to region
- Visible
- Change name
- Change color
- Edit caption
- Delete all regions
- Delete



The Label tool enables drawing of label region on study slices. To draw the region, mark the position of start and end points between which line should be drawn. The start point will be pointed to, and at the end point label's text will be shown. This region will be visible only on the slice on which it was drawn. The region has the following edit options, accessible through the region's context menu:

- Go to region
- Visible
- Change name
- Change color
- Edit caption
- Delete all regions
- Delete



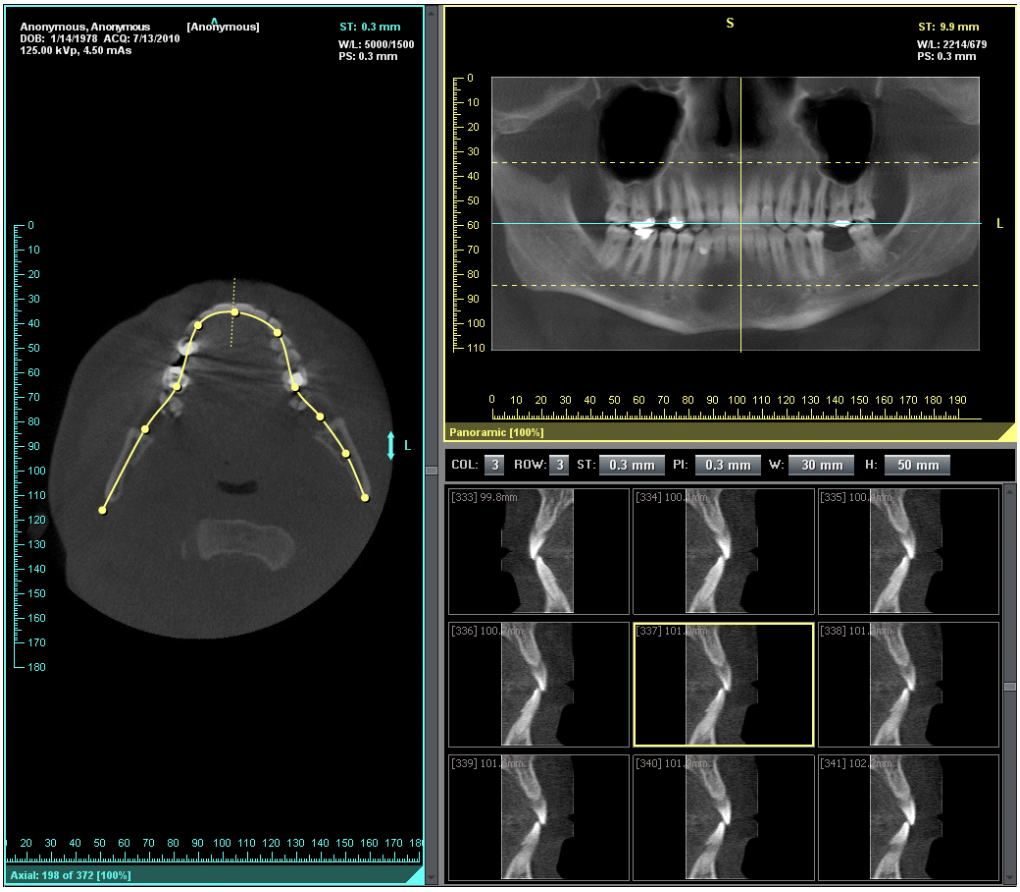
7.6 Panoramic Tool and Panoramic View

The *Panoramic Tool* enables drawing of panoramic region. To draw the region, mark the position of the control points that will define the shape of the region and the application will automatically draw a curve through the control points. The last control point is indicated by mouse double click. The region can be defined by at least two control points.

The region can be drawn only on Axial slices. Once it is drawn the region will be visible on all slices of the Axial view type.

The region can be edited through the following options, accessed via region's context menu:

- Go to region
- Visible
- Change name
- Change color
- Show hashmarks – enables display of region's hasmarks
- Insert point
- Delete point
- Delete all regions
- Delete



The region is used for defining Orthopan images. This means that the curve drawn in the Axial view will generate an image as a vertical intersection of the panoramic curve and all Axial slices of the study, forming a 2D Orthopan image. The generated image is displayed in the Panoramic view.

The Panoramic view is consisted of three viewing panels: Axial, Panoramic and Cross section. The Panoramic viewing panel displays the resulting Orthopan image. The functionalities of the panel are similar to the functionalities of the basic MPR viewing panels. Additionally, the panel displays a Vertical hairline that can be dragged / dropped by the user, and this hairline represents the position on the panoramic curve.

The Cross section viewing panel displays images generated as vertical intersections of the normals on the panoramic curve along its length and Axial slices. The user can set the width and height of the cross sectional images. The center of the image positioned in line with the currently displayed Axial slice (vertical position) and current position of the vertical panoramic hairline (horizontal position).

The user can define slice thickness and pitch (distance between two subsequently displayed images, measured in mm) of cross sectional images, as well as a number of images displayed in the viewing panel.

The user can draw 2D regions (distance, label, text, ellipse and rectangle) on both panoramic and cross sectional images. These regions are called child regions, and the panoramic region is named parent region. Deleting the parent panoramic region will cause a deletion of all of his child regions.

Changing MIP, Filter and WL settings will affect both panoramic and cross sectional images, but it will leave the Axial images intact.

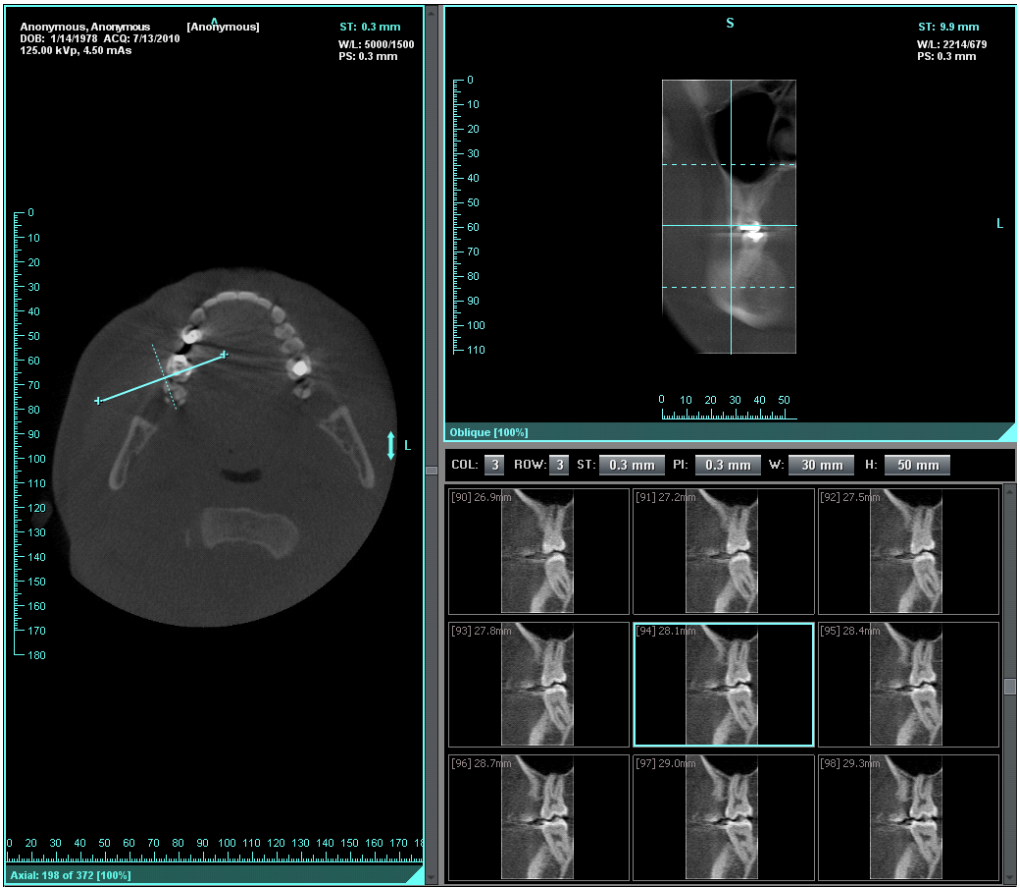
7.7 Oblique Tool and Oblique View

The Oblique tool enables drawing of oblique region. To draw the region, mark the position of two control points and the application will automatically draw a line connecting the control points. Unlike the Panoramic region the oblique region can be defined by two and only two control points.

The region inherits almost all functionalities of the Panoramic region, hence this chapter will describe only the features that differ from the Panoramic region's behavior.

The region can be edited through the following options, accessed via region's context menu:

- Go to region
- Visible
- Change name
- Change color
- Delete all regions
- Delete

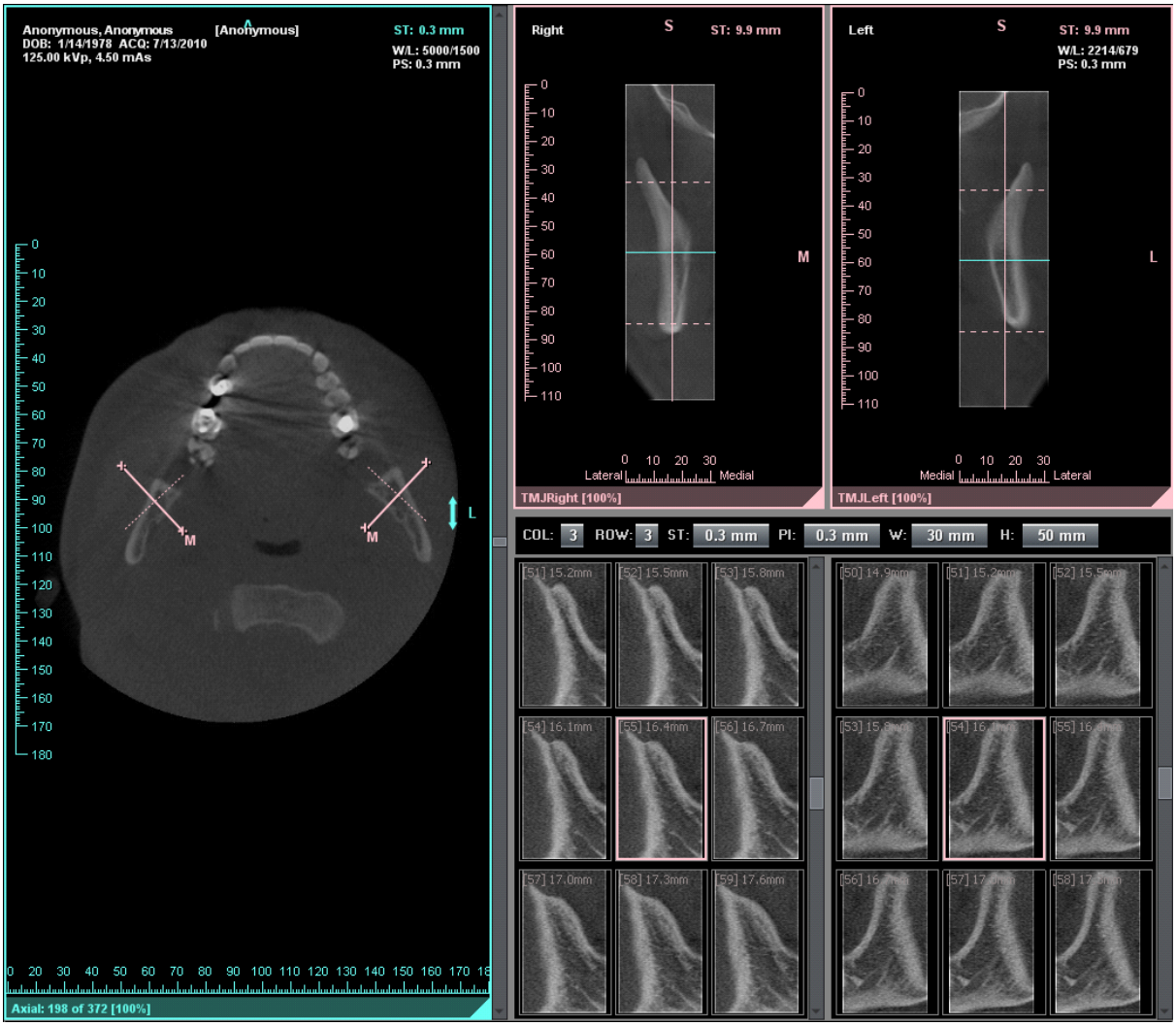


7.8 TMJ Tool and TMJ View

The TMJ tool enables drawing of The Temporomandibular Joint (TMJ) region. To draw the region, mark the position of two control points and the application will automatically draw a line connecting the control points. It will also generate a line mirror axial symmetric to the previous one.

The region can be drawn only on Axial slices of the study. Once it is drawn the region will be visible on all slices of the Axial view type.

The TMJ lines can be moved on the Axial slices – the user can drag and drop one of the lines, and the remaining line will be translated along with the first one. Additionally, the user can change the position of just one TMJ line by dragging/dropping it while pressing the CTRL key on the keyboard. Also, the user can change direction and length of both TMJ lines separately, without affecting the position, location or length of the other line by dragging / dropping control point of the desired TMJ line.



The region can be edited trough the following options, accessed via region's context menu:

- Go to region
- Visible
- Change name
- Change color
- Delete all regions
- Delete

The region is usually used for generating panoramic images of condyles. This means that the lines drawn in the Axial view will generate two images as a vertical intersection of the TMJ lines and all Axial slices of the study, forming a set of 2D panoramic image. The generated images are displayed in the TMJ view.

The TMJ view is consisted of five viewing panels: Axial, TMJ left, TMJ right, Cross section left and Cross section right. The TMJ left and right viewing panels display the resulting panoramic images. The functionalities of the panels are the same as the functionalities of the Panoramic and Oblique panels.

The Cross section viewing panels display images generated as vertical intersections of the normals on the TMJ lines along its length and Axial slices. The Cross section panels work in the same way as the Cross section panels of the Oblique and Panoramic views.

7.9 Regions Panel

The *Regions Panel* represents a list of all existing regions. When a region is drawn it is automatically added to the Regions Panel. Each region has its context menu that can be accessed by right clicking on region item in the list. The context menu items differ depending on region type. However there is a list of items that is common for all regions:

- Go to region – selecting this item will navigate to the frame containing selected region, making it currently visible.
- Visible – determines region's visibility. If one of the regions needs to be hidden, simply uncheck this option for wanted region. The option is checked by default.
- Change name – enables existing region's name change. To change region name click on the Change name item, this will prompt the input box dialog, allowing you to enter new name of the region. Click the OK button to save your changes.
- Change color – allows changing region's color. With the targeted region selected select the Change region color menu item. The color dialog box will open. Select the desired color and click the OK button, to change the color of the selected region.
- Delete – deletes the selected region.
- Delete all regions – deletes all existing regions from the study.

Part VIII

8 Refer Study Acquisition

In this section you can find more information about study referrals and interconnection of *CT* Premium systems with *CB Link* portal. *CT Premium* system is a system comprising of *CT Premium* client desktop application and *CT Premium* scanner device, that is used for acquiring and viewing of patient's scans.

Referral of study acquisition is a process of acquiring patient's scan from one of *CT Premium* Ordering Practices through *CB Link* portal. *Referring Doctor* can refer a patient to one of *CT Premium* Ordering Practices for a scan and then access the relevant study through *CB Link* portal.

Crucial roles in this process are:

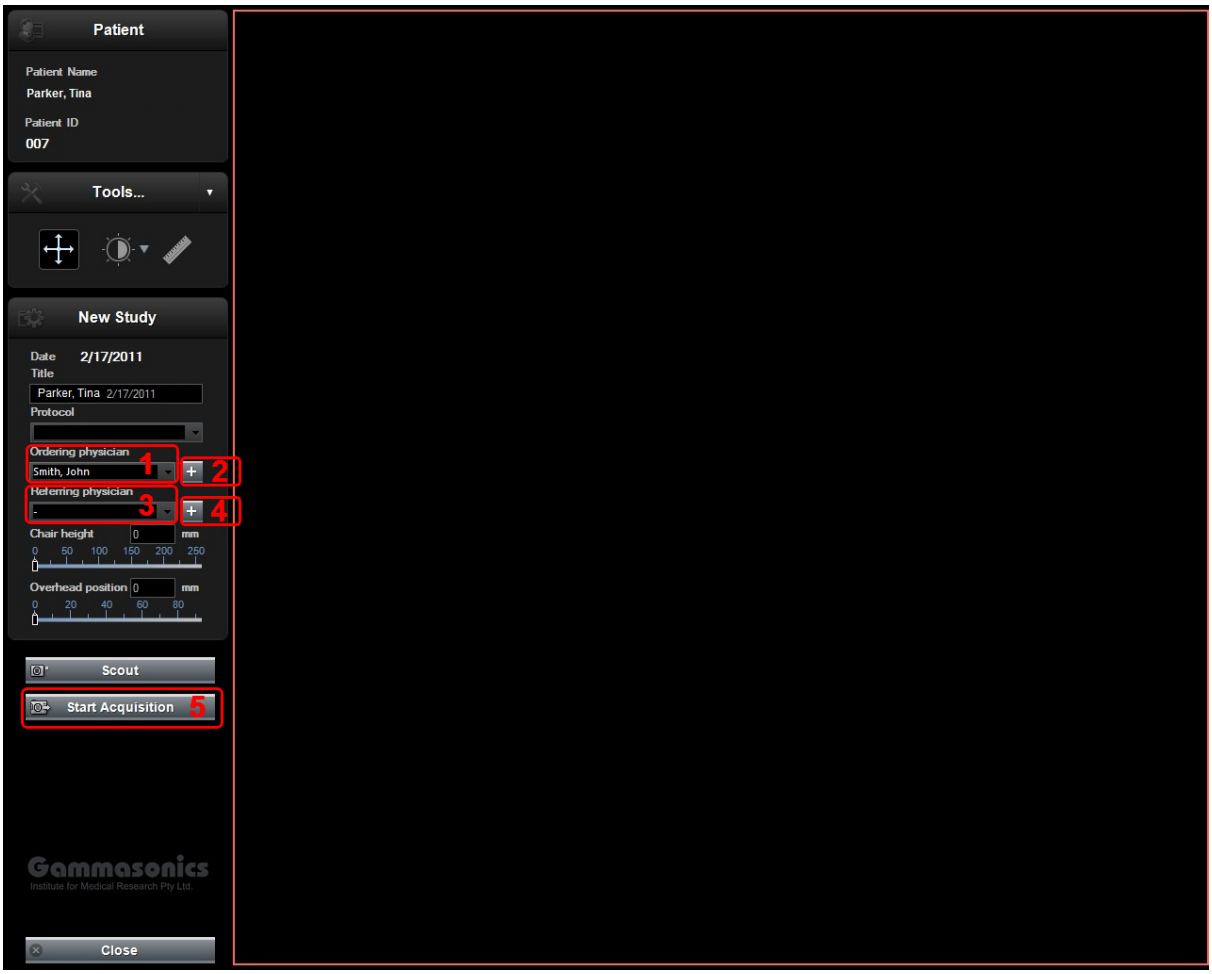
- *Patient* which needs a scan.
- *Ordering Practice and Doctor* - Doctor and a practice with *CT Premium* system that can perform scan acquisition of the patient.
- *Referring Doctor* - Doctor requesting a patient scan. He refers the patient to an *Ordering Practice,* where *Ordering Doctor* will, with his *Performing Doctor/Technician,* make patient scan in *CT Premium* and refer it to *CB Link* portal for the *Referring Doctor* to see it.
- *Performing Doctor/Technician* - User logged in *CT Premium* application, making a patient scan to refer it to the *Referring Doctor* in *CB Link* portal.

Note:

- In a case of a patient visiting directly practice with *CT Premium* system *(Ordering Practice), Referring* and *Ordering Doctor* will be the same and only the *Ordering Doctor* will be listed for the study acquired.
- Very often, *Ordering Doctor* is the same person as *Performing Doctor/Technician.*
- Prior to referring study acquisition, *Referring Doctor* has to be a registered *CB Link* user. If *Referring Doctor* is not a *CB Link* user, before any referrals he has to register in *CB Link* portal (as describe in section *Register* in *Quick Guide* chapter).
- Ordering Doctor is always a *CT Premium user.*

8.1 Refer Study Acquisition in CT Premium

To do a scan acquisition for a patient referred to his *Ordering Practice*, *Performing Doctor/Technician* should log in into *CT Premium* application and go to the Study Acquisition Form for patient (as shown in picture below)



After setting all other relevant parameters for a new study (see *CT Premium* Manual), in order to set *Referring and Ordering Doctor* in *CT Premium*, the *Performing Doctor/Technician* should insure that *Referring and Ordering Doctor* were previously linked with their *CB Link* accounts through Username or ID.

Note: Insuring link between *CT Premium* and *CB Link* accounts for doctors will provide that *Ordering* and *Referring Doctor* can access the study in *CB Link* portal when acquisition is completed.

To set *Ordering Doctor* for the study, *Performing Doctor/Technician* should select doctor from **Ordering Physician** drop down list for an existing and linked *Ordering Doctor* (marked 1 in picture above), or add a new *Ordering Doctor* clicking on '**+**' button (marked 2) and link him as described in section *Linking Ordering Doctor* of this chapter.

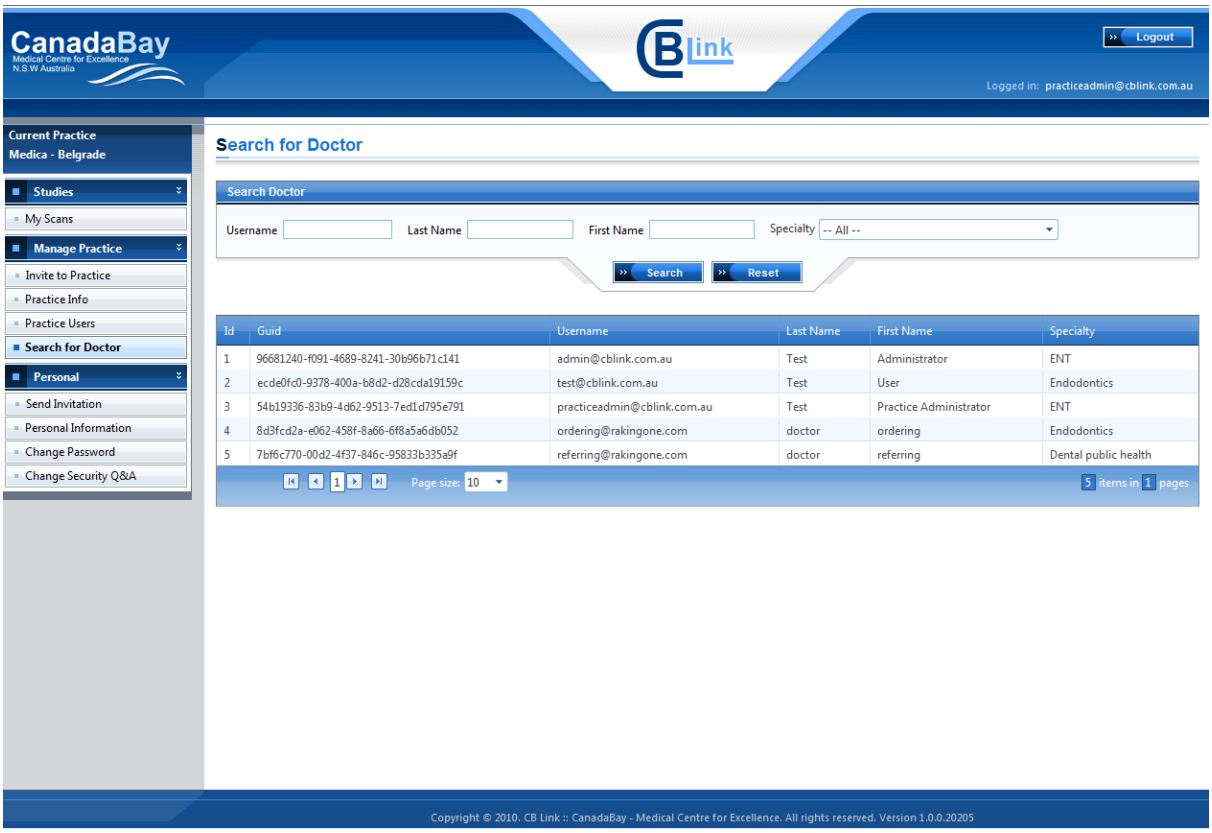
To set Referring Doctor for the study (if any), *Performing Doctor/Technician* should select doctor from **Referring Physician** drop down list for an existing and linked *Referring Doctor* (marked 3 in picture above), or add a new *Referring Doctor* clicking on '**+**' button (marked 4) and link him as described in section *Linking Referring Doctor in CT Premium to CB Link Doctor* of this chapter.

After setting all relevant parameters, to create a scan start acquisition (marked 5). Upon successful scan acquisition, study will be automatically sent to *CB Link* and both *Ordering* and *Referring Doctor* will be able see it in their *My Scans* section of portal.

Note: In a case of a patient visiting directly practice with *CT Premium* system (*Ordering Practice*), given that Referring and Ordering Doctor will be the same, only the *Ordering Doctor* will be listed for the scan acquired.

8.2 Acquire Doctor's Username or ID from CB Link

To acquire doctor's username or ID (Guid) in *CB Link* portal, log in to *CB Link* as a *Practice Administrator* and go to *Search for Doctor* page (as describe in *Search for Doctor* paragraph in *Manage Practice* section).

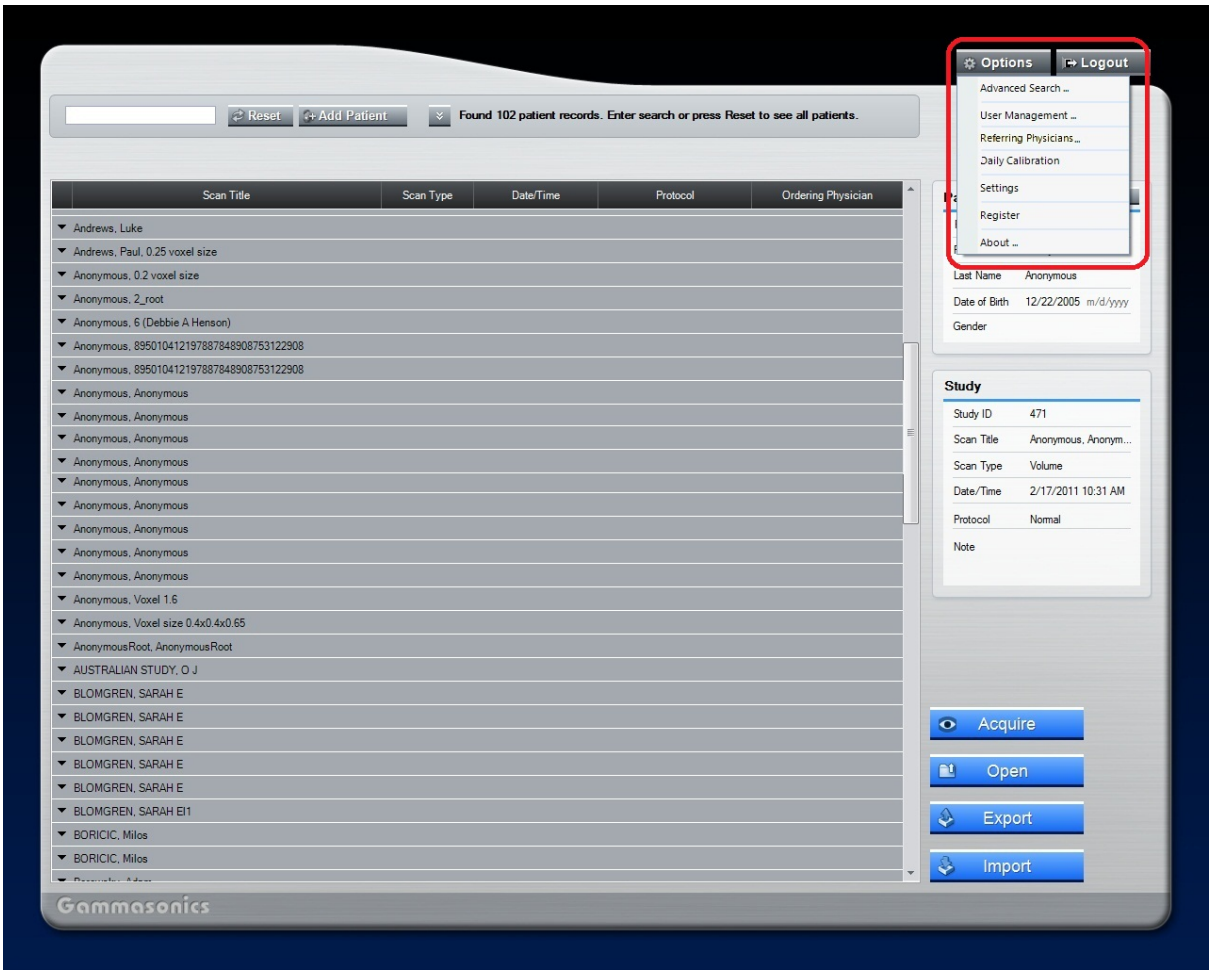


You will find username or ID for the relevant Doctor in columns **Username** and **Guid** of the table.

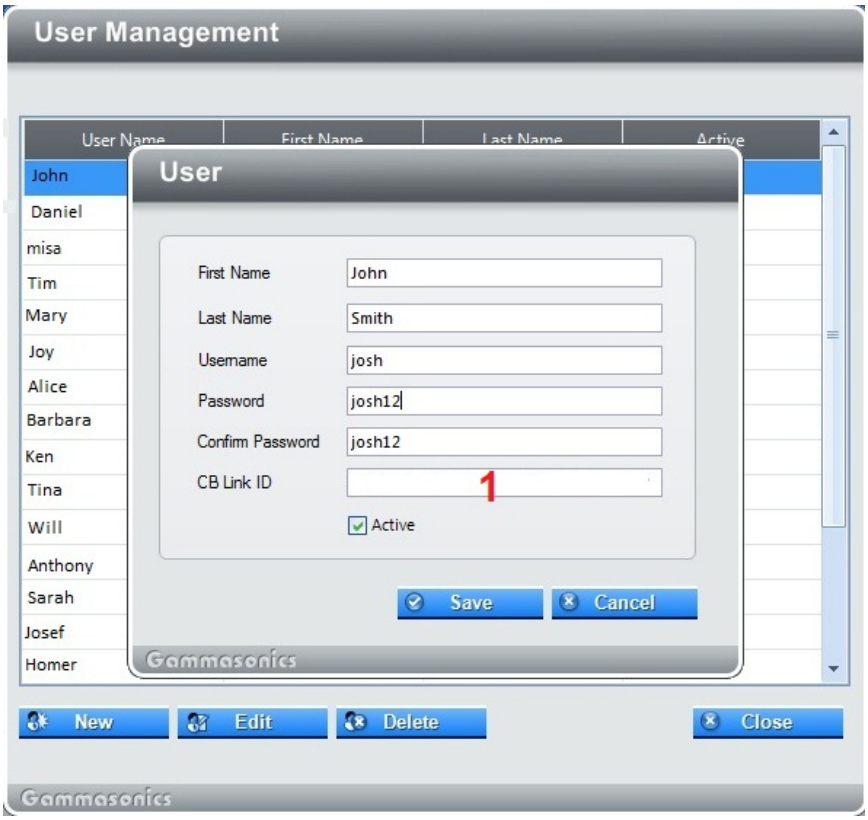
8.3 Link Ordering Doctor

If *Ordering Doctor* already is a *CT Premium* user, before any scan acquisition, *Ordering Doctor* in *CT Premium* has to be linked with the his *CB Link* account through his ID (Guid).

To do that, log in to *CT Premium,* go to *Options* (marked red) in Patient Management Form (as shown in picture below) and click on *User Management*



User Management page will open. Select *Ordering Doctor* from **User List** and click **Edit** to open User page (as presented below)



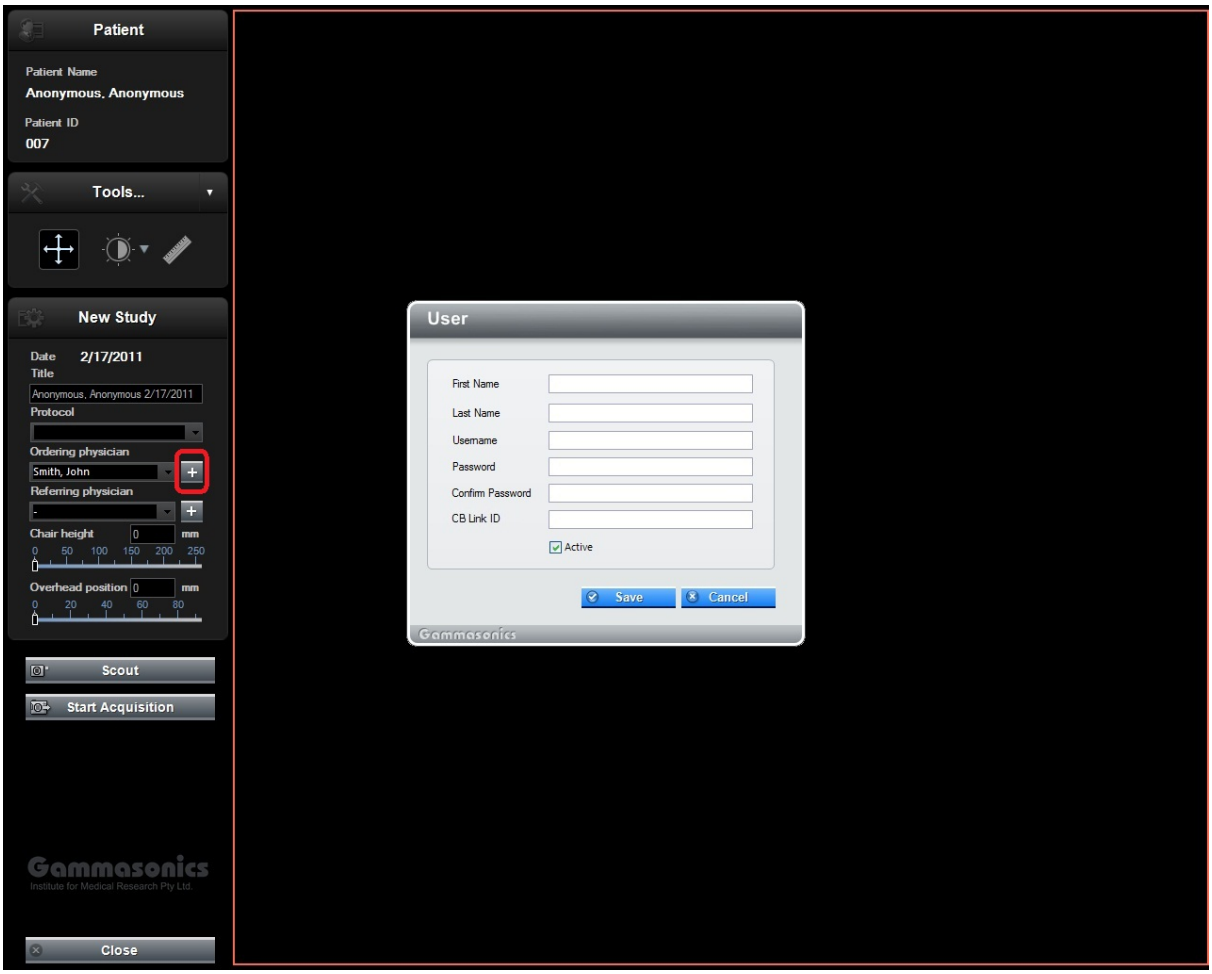
In *CB Link* ID field (marked with 1) insert doctor's *CB Link* Guid (e.g. *8c7ae51d-c4d9-4cf3-b1fb-26cd606217ef*), acquired as described in section *Acquire Doctor's Username or ID from CB Link* of this chapter and save changes clicking the **Save** button. After *Ordering Doctor* is linked with his *CB Link* account, he will be able to see all his studies in *CB Link* portal in *My Scans* section (as described in chapter *Studies*)

Linking CT Premium and CB Link accounts for Ordering Doctor should be done only once per doctor and should not be repeated for every scan acquisition.

Adding and Linking a New Ordering Doctor

If *Ordering Doctor* is still not a CT Premium user, before any scan acquisition or linking, he has to be added to *CT Premium* application as *CT Premium* User, by clicking **New** button in User Management page. User form will open. Insert relevant information including acquired *CB Link ID* and create new *CT Premium* User pressing **Save** button.

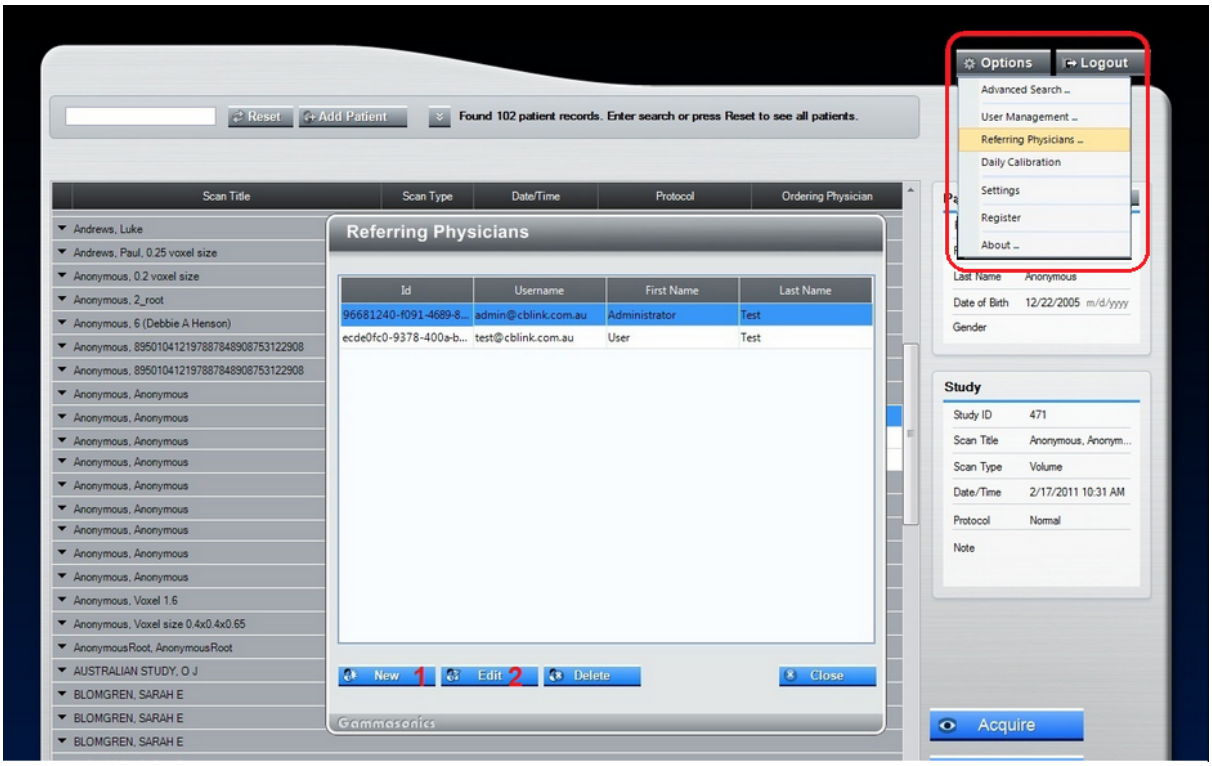
A new Ordering Doctor can also be added from the *Acquisition Form*, by clicking on '+' button next to Ordering Physician field (marked with red in picture below).



8.4 Link Referring Doctor

If *Referring Doctor* is already a *CB Link* user, before starting any scan acquisition, *Referring Doctor* in *CT Premium* has to be linked with his *CB Link* account through Username or ID.

To do that, log in to *CT Premium,* go to *Options* (marked red) in Patient Management form (as shown in picture below) and click on *Referring Physicians.* The Referring Physicians page will open (as shown in picture below).

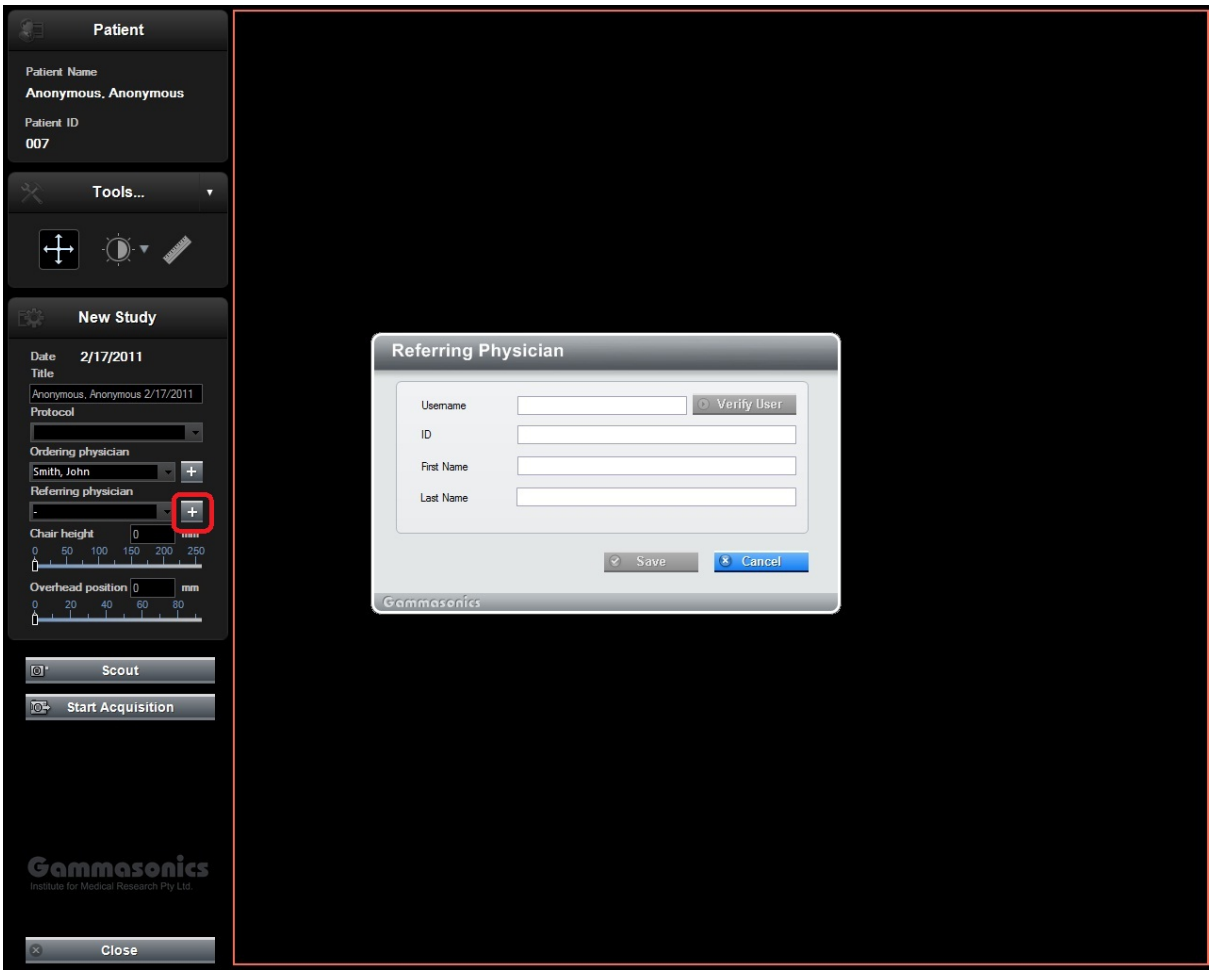


To add/link to a new Referring Doctor from *CB Link*, click on button **New** (marked with 1). The Referring Physician will open.

To link *Referring Doctor*, insert in **Username** or **ID** field in the form his username or ID (Guid) acquired as described in section *Acquire Doctor's Username or ID from CB Link in* this chapter and click on **Verify User** button. If verification is successful, other fields (First Name, Last Name) in the form will populate with data from *CB Link*. After successful verification, by clicking on **Save** button you will create and link new *Referring Doctor* in *CT Premium*.

In a case of unsuccessful verification check acquired Username or ID from *CB Link* and contact *CB Link* Administrator.

A new Referring Doctor can also be added from the Acquisition Form, by clicking on **'+'** button next to **Referring Physician** field (marked with red in picture below).



To edit existing Referring Doctor in *CT Premium*, select him from the list in the Referring Physicians page (as shown in picture above) and click on **Edit** button (marked with 2).

After *Referring Doctor* is linked with his *CB Link* account, he will be able to see all his referred studies in *CB Link* portal in *My Scans* section after the acquisition (as described in chapter *Studies*)

8.5 Study in CB Link

To see a referring scan, *Referring Doctor* (or *Ordering Doctor*) should log in to *CB Link* portal and access the study in his *My Scans* section, as described in chapter *Studies.*